

RESTRICTED
UNCLASSIFIED

IONOSPHERIC DATA

ISSUED
APRIL, 1945

PREPARED BY INTERSERVICE RADIO PROPAGATION LABORATORY
National Bureau of Standards
Washington, D.C.

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IONOSPHERIC DATA

Note.— Following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, median values of all ionospheric characteristics are reported, beginning with data for January, 1945, for Washington, for all stations reporting to the IRPL, i.e., Baffin I., Canada; Christmas I.; Fairbanks, Alaska; Reykjavik, Iceland; Maui, Hawaii; Trinidad, Brit. West Indies; Huancayo, Peru; Watheroo, W. Australia; San Francisco, Calif.; Baton Rouge, La.; San Juan, Puerto Rico, and for the Canadian stations at Churchill and Ottawa, Canada. Conventions used in determining median values are given on page 6.

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Monthly averages of critical frequencies, virtual heights and F2-layer maximum usable frequency factors for all data prior to 1 January 1945, median values of these quantities for subsequent data from the stations listed above, median values of highest frequency of Es reflections; and (graphical presentation only) percentage of total time of occurrence of Es above 3, 5, and 7 Mc.

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TERMINOLOGY

The symbols and terminology used in this report are those adopted by the International Radio Propagation Conference, and given in detail on pages 24 to 26 of the report IRPL-C61, "Report of International Radio Propagation Conference", and on pages 4 and 5 of the previous F-series reports IRPL-F1, 2, 3, 4, 5, and 6.

MONTHLY AVERAGES AND MEDIAN VALUES OF IONOSPHERIC DATA

The tables and graphs of ionospheric data presented here are assembled by the Interservice Radio Propagation Laboratory for analysis and correlation principally incidental to IRPL predictions of radio propagation conditions. These data are furnished by the following:

Carnegie Institution of Washington (Department of Terrestrial Magnetism)
 Baffin I., Canada
 Christmas I.
 Fairbanks, Alaska (University of Alaska, College, Alaska)
 Reykjavik, Iceland
 Maui, Hawaii
 Trinidad, Brit. West Indies
 Huancaayo, Peru
 Watheroo, W. Australia

British National Physical Laboratory, and Inter-Services Ionosphere Bureau
 Radio Research Station, Slough, England
 Great Baddow, England
 Burghead, Scotland
 Delhi, India
 Madras, India
 Simonstown, Union of S. Africa

Australian Council for Scientific and Industrial Research
 Radio Research Board, Australia
 Brisbane, Q., Australia
 Mt. Stromlo, Canberra, NSW, Australia
 Cape York, Q., Australia

Canadian Department of National Defence, Naval Service
 Churchill, Canada
 Ottawa, Canada

New Zealand Radio Research Committee
 Kermadec Is.
 Christchurch (Canterbury University College Observatory)
 Campbell Is.
 Pitcairn I.
 Rarotonga I.

Peoples' Commissar for Postal and Electric Communications, Moscow, U.S.S.R.
 Tykhi Bay, U.S.S.R.
 Tomsk, U.S.S.R.
 Sverdlovsk, U.S.S.R.
 Moscow, U.S.S.R.

National Bureau of Standards, Washington, D.C.
 Stanford University, (San Francisco), California
 Louisiana State University, Baton Rouge, Louisiana
 University of Puerto Rico, San Juan, P.R.
 United States Army Air Forces, Pacific Ocean Area
 Guam I.
 Kwajalein Atoll
 Harvard University, Boston, Mass.

The "provisional data" tables give values as reported to the IRPL by telephone or telegraph. Any errors in these values will be corrected in later issues of the F-series reports.

The "final data" tables and graphs are correct for the values reported to the IRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of these errors are due to;

- a. Differences in scaling records where spread echoes are present.
- b. Omission of values where f^oF_2 is less than or equal to f^oF_1 , leading to erroneously high values of monthly average or median values.
- c. Omission of values where critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series reports, IRPL-F1, 2, 3, 4, and 5. Discrepancies between predicted and observed values are often ascribable to these effects.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR

These data, observed at Washington, D.C., follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference", pages 36 to 39.

In determining the median values presented in this report, the following Conventions have been adopted:

a. For all characteristics where the value is missing because of A, B, or C (see IRPL-C61, loc. cit.), that hour is omitted from the median count.

b. In addition,

(1) For critical frequencies;

For all layers, where a value is missing because of E (see IRPL-C61, loc. cit.), it is counted as less than the lower limit of the recorder.

(2) For virtual heights;

Values missing for any reason are omitted from the median count.

(3) For muf factors;

Where a value is missing because of G (see IRPL-C61, loc. cit.), it is counted as less than the median count.

Values missing for any other reason are omitted from the median count.

IONOSPHERE DISTURBANCES

Table 58 presents ionospheric character figures for Washington, D.C., during March, 1945, as determined by the criteria presented in the report IRPL-R5, "Criteria for Ionospheric Storminess", together with American magnetic K-figures which are usually covariant with them.

Table 59 presents sudden ionospheric disturbances, as observed at Washington, D.C., during March 1945.

NEW STATIONS

Stations for which data appear in this report for the first time are as follows:

A. Rarotonga I. (Cook Is.), 21.4°S, 159.6°W, operated by New Zealand Radio Research Committee. See Table 31 and Fig. 29.

B. Boston, Mass. (Lexington, Mass.), 42.4°N, 71.2°W, operated by Harvard University. See Table 21 and Figs. 9 and 10.

ERRATA

1. All the values reported for Moscow and Tykhi Bay in IRPL-F6 (Feb. 1945) as $f^{\circ}F2$ were actually $f^{\times}F2$.

2. The provisional values of M-3000 reported for Baffin I. for the following months are in error and should be disregarded:

October, appearing in IRPL-F3 (Nov. 1944)

November, appearing in IRPL-F4 (Dec. 1944)

December, appearing in IRPL-F5 (Jan. 1945)

January, appearing in IRPL-F6 (Feb. 1945).

Corrected values will be reported as received.

Table 1 (Provisional data)

Barfin I., Canada (70.5°N, 68.6°W) March, 1945

Time	h'P2	f°P2	h'Fl	f°Fl	h'E	f°E	fEs	F2-M3000
00	300	2.5						3.0
01	300	2.4						3.0
02	300	2.6						3.0
03	300	2.3						3.1
04	320	2.1						3.8
05	290	2.8						3.2
06	270	3.2						3.0
07	280	3.3						3.2
08	310	4.0						2.9
09	350	4.1						3.0
10	350	4.1						3.0
11	380	4.2						3.1
12	340	4.6						3.0
13	350	4.4						3.1
14	350	4.4						2.8
15	280	4.2						3.0
16	300	4.2						3.2
17	260	4.2						3.1
18	260	3.8						3.1
19	280	3.6						3.0
20	280	3.2						3.1
21	280	3.1						2.9
22	300	2.7						3.0
23	290	2.6						3.0

Time: 75°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 3 (Provisional Data)

Reykjavik, Iceland (64.1°N, 21.7°W) March, 1945

Time	h'P2	f°P2	h'Fl	f°Fl	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	270	2.6						3.2
07	280	3.4						3.3
08	220	3.9						3.2
09	210	4.5						3.3
10	210	4.3						3.3
11	240	5.1						3.1
12	280	5.3						3.5
13	250	5.5						3.2
14	260	5.7						3.3
15	240	5.4						3.3
16	240	4.9						3.4
17	230	5.0						3.4
18	230	4.6						3.4
19	230	4.6						3.2
20	240	4.3						3.2
21	280	4.5						3.2
22	240	3.6						3.1
23	280	3.0						3.1

Time: 150°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 2 (Provisional Data)

Fairbanks, Alaska (64.9°N, 147.8°W) March, 1945

Time	h'P2	f°P2	h'Fl	f°Fl	h'E	f°E	fEs	F2-M3000
00	315	1.9						2.8
01	305	2.2						2.8
02	330	2.2						2.9
03	350	2.0						2.8
04	345	2.2						2.9
05	325	2.2						2.8
06	282	2.6						1.5
07	260	3.3						2.2
08	245	3.8						2.2
09	300	4.2						2.4
10	302	4.4						3.1
11	345	4.5						3.0
12	302	4.7						3.2
13	310	4.7						3.1
14	272	5.0						3.1
15	242	5.0						2.3
16	250	5.0						2.0
17	245	5.0						3.2
18	245	4.2						1.6
19	248	3.9						3.1
20	250	2.9						1.4
21	265	2.2						3.1
22	270	2.0						3.1
23	300	2.0						2.9

Time: 150°W.

Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Median values.

Table 4 (Provisional Data)

Churchill, Canada (58.8°N, 94.2°W) March, 1945

Time	h'P2	f°P2	h'Fl	f°Fl	h'E	f°E	fEs	F2-M3000
00								3.1
01								2.9
02								2.8
03								
04								
05								
06								3.0
07								3.1
08								3.1
09								3.0
10								3.0
11								3.0
12								3.0
13								3.0
14								3.0
15								3.1
16								2.9
17								3.0
18								3.0
19								2.9
20								3.0
21								2.9
22								2.9
23								2.9

Time: 90°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 5 (Provisional Data)

Great Baddow, England (51.7°N, 0.5°E)

March, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f _{min}	P2-M3000
00		2.9						2.7
01		2.7						2.7
02		2.7						2.7
03		2.6						2.7
04		2.3						2.8
05		2.1						2.9
06		2.9						3.0
07		2.8						3.0
08		4.0						3.2
09		4.7						3.3
10		5.1						3.2
11		5.6						3.3
12		5.8						3.1
13		5.8						3.2
14		5.9						3.2
15		5.9						3.2
16		5.8						3.2
17		5.6						3.2
18		5.7						3.3
19		5.4						3.1
20		4.6						3.0
21		3.7						2.9
22		3.1						2.8
23		3.0						2.7

Time, 0°.
 Length of time sweep, Manual operation.
 Mean values.

Table 7 (Provisional Data)

Christmas I. (2.0°N, 157°W)

March, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f _{min}	P2-M3000
00	240	8.2						3.4
01								
02								
03								
04								
05	250	2.5			120	2.4		3.2
06		5.9						3.8
07	240	7.7						3.0
08	230	8.0						2.7
09	305	8.0	220	4.4	115	3.0		2.7
10	320	7.5	210	4.6				2.7
11	340	7.3	200	4.7				2.7
12	340	7.8	200	4.8				2.6
13	330	8.4	200	4.8				2.6
14	320	9.3	200	4.7				2.7
15	300	10.0	195	4.6				2.8
16	300	10.8	210	4.2				3.0
17	265	10.8	230		110			3.1
18	245	10.8						3.2
19	250	10.6						3.0
20	250	10.2						3.0
21	240	9.2						3.2
22	240	9.0						3.1
23	240	8.6						3.2

Time, 150°.
 Length of time sweep, Manual operation.
 Median values.

Table 6 (Provisional Data)

Maui, Hawaii (20.8°N, 156.6°W)

March, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f _{min}	P2-M3000
00	260	3.8						3.1
01	240	3.8						3.2
02	240	3.6						3.4
03	220	3.4						3.4
04	220	2.5						3.4
05	260	2.3						3.0
06	300	2.4						3.0
07	230	5.0						3.5
08	220	6.4	220		120	2.5		3.3
09	260	7.7	200	4.6	110	2.9		3.1
10	300	8.8	200	4.7	110	3.2		3.0
11	300	9.8	200	4.7	110	3.4		2.9
12	320	11.2	200	4.7	110	3.4		2.9
13	290	12.8	200	4.8	110	3.4		3.1
14	280	13.0	200	4.7	110	3.4		3.0
15	260	12.6	200	4.6	110	3.2		3.2
16	240	10.8	200	4.3	110	3.0		3.4
17	230	9.0	200	3.8	110	2.6		3.4
18	220	7.6						3.4
19	220	6.0						3.4
20	220	4.7						3.3
21	250	4.2						3.1
22	270	3.8						2.9
23	280	3.8						3.1

Time, 150°.
 Length of time sweep, 2 Ms to 16 Ms in one minute.
 Median values.

Table 8 (Provisional Data)

Buenos Ayre, Peru (12°S, 75.3°W)

March, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f _{min}	P2-M3000
00		8.2						3.2
01		7.0						3.2
02		5.5						3.2
03		4.3						3.3
04		3.2						3.3
05		2.2						3.2
06		4.1						3.2
07		7.1						3.3
08		8.3						3.1
09		3.0						2.8
10		8.8						2.6
11		8.4						2.6
12		8.4						2.6
13		8.8						2.6
14		8.8						2.7
15		9.2						2.6
16		9.6						2.6
17		9.4						2.6
18		9.2						2.6
19		8.8						2.7
20		8.4						2.8
21		8.5						2.9
22		8.5						3.0
23		8.4						3.1

Time, 75°.
 Length of time sweep, 16 Ms to 0.5 Ms in fifteen minutes.
 Median values.

Table 9 (Provisional Data)

Simonstown, Union of S. Africa (33.9°S, 18.7°E) March, 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fWe	F2-M3000
00		3.5						3.1
01		3.4						3.0
02		3.3						3.0
03		3.3						3.1
04		3.3						3.1
05		3.2						3.1
06		2.9						3.1
07		4.1						3.2
08		5.8						3.2
09		6.7						3.1
10		7.1						3.1
11		7.5						3.0
12		8.1						3.0
13		8.5						2.9
14		8.5						3.0
15		8.5						3.0
16		8.4						3.1
17		8.0						3.1
18		7.5						3.2
19		6.7						3.2
20		5.3						3.2
21		4.2						3.1
22		4.0						3.1
23		3.6						3.1

Time: 1500.

Length of time sweep: 2 Mc to 16 Mc in fifteen minutes.

Mean values.

Table 11 (Provisional Data)

Aberhead, Scotland (57.7°N, 3.5°W) February, 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fWe	F2-M3000
00		2.4						
01		2.3						
02		2.3						
03		2.1						
04		2.0						
05		1.9						
06		1.9						
07		2.4						
08		3.2						
09		4.6						
10		5.5						
11		5.6						
12		6.0						
13		6.2						
14		6.0						
15		5.8						
16		5.5						
17		5.3						
18		4.8						
19		4.3						
20		3.4						
21		2.9						
22		2.6						
23		2.5						

Time: 00

Mean values.

Table 10 (Provisional Data)

Christchurch, N.Z. (43.5°S, 172.6°E) March, 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fWe	F2-M3000
00	269	4.00						
01	268							
02	253	3.56						
03	251	3.02						
04	250	2.65						
05	256	2.34						
06	242	3.12						
07	239	4.49	214	3.41	93	2.13		
08	275	5.31	211	3.76	95	2.59		
09	231	5.80	206	4.06	95	2.75		
10	275	6.35	212	4.29	96	2.89		
11	261	6.35	213	4.39	93	3.10		
12	299	6.55	211	4.43	97	3.13		
13	289	6.61	213	4.40	95	3.11		
14	283	6.80	221	4.35	97	3.05		
15	278	6.40	222	4.14	98	2.90		
16	270	6.29	226	3.84	98	2.82		
17	247	6.22	228	3.46	99	2.23		
18	233	6.16			96	1.73		
19	237	6.33						
20	245	5.79						
21	255	5.34						
22	259	4.80						
23	263	4.22						

Time: 172.50E.

Length of time sweep: 2.5 Mc to 12 Mc in two minutes.

Mean values.

Table 12 (Provisional Data)

Selli, India (28.6°N, 77.2°E) February, 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fWe	F2-M3000
00		2.7						
01		2.9						
02		2.3						
03		2.8						
04		2.7						
05		2.5						
06		2.7						
07		5.2						
08		6.5						
09		7.4						
10		7.9						
11		8.2						
12		8.2						
13		8.6						
14		8.3						
15		8.4						
16		7.7						
17		7.5						
18		6.9						
19		5.1						
20		3.9						
21		3.3						
22		2.9						
23		2.3						

Time: 750E.

Mean values.

Table 13 (Provisional Data)

Cape York, Q., Australia (11.0°S, 142.4°E) February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	P2-M3000
00		7.4						3.2
01		6.7						3.4
02		5.7						3.3
03		4.8						3.3
04		3.8						3.5
05		2.9						3.3
06		3.3						3.3
07		5.3						3.4
08		6.3						3.2
09		7.3						3.1
10		8.3						2.9
11		9.3						2.9
12		9.4						3.9
13		11.1						3.1
14		11.4						3.3
15		11.1						3.3
16		10.4						3.2
17		9.5						3.1
18		8.6						3.1
19		8.0						2.9
20		7.9						2.9
21		7.8						2.9
22		7.5						3.0
23		7.5						3.1

Time: 1500Z.
Mean values.

Table 14 (Provisional Data)

Watheroo, W. Australia (30.3°S, 115.9°E) February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	P2-M3000
00	263	4.09						2.9
01	258	4.03						2.9
02	247	3.73						3.0
03	246	3.46						3.0
04	248	3.19						3.0
05	247	2.93						3.0
06	245	3.83				1.52		3.2
07	259	4.83				2.21		3.3
08	319	5.24	221	4.02		2.73		3.1
09	345	5.53	213	4.26		3.03		3.0
10	350	5.79	212	4.38		3.18		3.0
11	352	6.15	202	4.43		3.28		3.0
12	334	6.66	213	4.47		3.31		3.0
13	320	6.91	213	4.45		3.30		3.0
14	321	7.06	217	4.42		3.27		3.0
15	307	7.17	222	4.30		3.16		3.0
16	288	7.03	220	4.12		2.93		3.2
17	278	6.59	217	3.80		2.58		3.2
18	252	6.32				1.94		3.2
19	230	5.97						3.2
20	233	5.40						3.0
21	244	4.73						3.0
22	257	4.34						2.9
23	265	4.20						2.9

Time: 1200Z.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Mean values.

Table 15 (Provisional Data)

Mt. Stromlo, N.S.W. (35.3°S, 149.0°E) February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	P2-M3000
00	304	4.27						
01	289	4.21						
02	277	4.01						
03	272	3.62						
04	265	3.19						
05	269	2.89						
06	255	4.03						
07	279	4.69	234	3.44	115	2.37		
08	300	5.13	227	3.83	111	2.70		
09	325	5.44	215	3.93	104	2.99		
10	335	5.78	211	4.11	101	3.14		
11	345	6.02	213	4.30	102	3.28		
12	343	6.09	209	4.37	102	3.36		
13	339	6.32	209	4.35	102	3.53		
14	330	6.42	211	4.27	102	3.22		
15	309	6.45	210	4.17	103	3.09		
16	296	6.43	213	4.00	103	2.93		
17	283	6.20	218	3.65	104	2.69		
18	265	5.98	229	3.20	116	2.16		
19	254	5.83						
20	259	5.44						
21	268	5.02						
22	281	4.60						
23	295	4.46						

Time: 1500Z.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Mean values.

Table 16 (Provisional Data)

Slough, England (51.5°N, 0.6°W) January, 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	P2-M3000
00		2.75						
01		2.78						
02		2.72						
03		2.50						
04		2.38						
05		2.29						
06		2.11						
07		2.17						
08		4.12						
09		5.48						
10		5.99						
11		6.37						
12		6.37						
13		6.24						
14		6.13						
15		5.60						
16		5.19						
17		4.43						
18		3.40						
19		2.87						
20		2.63						
21		2.77						
22		2.75						
23		2.86						

Time: Local
Mean values.

Table 17

Ottawa, Canada (45.5°N, 75.6°W)

March, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	320	2.9					2.8	2.8
01	350	2.8					3.0	2.7
02		2.5					2.9	2.8
03		2.5					3.0	2.9
04		2.4					3.0	2.6
05		2.3					3.0	3.0
06	280	3.1					3.0	3.0
07	240	4.0	240	3.4	125	2.4	3.6	3.2
08	250	4.8	220	4.0	130	2.5	4.2	3.2
09	280	5.2	220	4.0	120	2.7	4.2	3.1
10	290	5.5	200	4.1	120	2.9	4.6	3.1
11	300	5.7	210	4.2	120	3.0	4.8	3.1
12	310	5.8	200	4.3	120	3.0	4.8	3.0
13	305	6.0	210	4.3	120	3.0	4.0	3.1
14	300	6.0	210	4.2	120	2.9		3.1
15	290	6.0	220	4.1	120	2.9		3.1
16	280	6.0	230	3.6	120	2.6		3.1
17	260	6.0	240	3.3	130	2.4		3.1
18	240	5.9						3.1
19	240	5.5						3.0
20	250	4.6						3.0
21	260	4.0						2.9
22	280	3.7						2.8
23	290	3.0						2.8

Time: 75°W

Length of Time Sweep: 1.93 Mc to 13.5 Mc Manual operation.

Median values.

Table 19

Washington, D.C. (38.0°N, 77.5°W)

March, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	2.9					2.9	2.9
01	280	2.6					2.9	2.9
02	280	2.6					3.0	2.9
03	280	2.4					3.0	3.0
04	260	2.2					3.0	3.0
05	270	2.2					3.1	3.1
06	260	2.5					3.3	3.3
07	240	4.4			120	2.0	2.3	3.3
08	260	5.0	225	3.6	120	2.4	3.1	3.3
09	280	5.4	220	4.0	120	2.8	3.0	3.2
10	300	5.6	220	4.2	120	3.0		3.1
11	310	5.9	220	4.3	120	3.2		3.1
12	300	6.3	220	4.3	120	3.3		3.0
13	300	6.3	230	4.3	120	3.2		3.1
14	300	6.4	220	4.2	120	3.2		3.1
15	300	6.5	230	4.1	120	3.0		3.1
16	280	6.2	235	3.8	120	2.7	2.8	3.1
17	260	6.2	240	3.4	120	2.2		3.2
18	240	6.0			140	1.3		3.2
19	240	5.4						3.1
20	240	4.6						3.0
21	260	3.9						3.0
22	270	3.5						3.0
23	280	3.2						2.9

Time: 75°W

Length of time sweep: 0.8 Mc to 14 Mc in two minutes.

Median values.

Table 18

Nestor, Mass. (44.0°N, 71.2°W)

March, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	2.6						3.2
01	260	2.3						3.2
02	265	1.9					1.1	3.2
03	275	1.9					1.1	3.2
04	270	1.9					1.1	3.2
05	265	1.9						3.3
06	250	3.1			130	1.4		3.6
07	240	4.5	230	2.3	125	2.1		3.7
08	250	4.8	222	3.8	120	2.5		3.6
09	300	5.3	225	4.0	120	2.7		3.5
10	305	5.6	220	4.1	120	2.8		3.5
11	310	5.8	222	4.3	120	2.9		3.4
12	305	5.0	230	4.2	120	3.0		3.4
13	310	6.1	228	4.2	120	3.0		3.4
14	300	6.2	230	4.0	120	2.8		3.5
15	300	6.2	232	3.8	120	2.7		3.4
16	270	6.0	240	3.5	120	2.4		3.5
17	250	5.9	250		130	2.0		3.5
18	240	5.7			130	1.2		3.5
19	235	5.2			120			3.4
20	245	4.3						3.3
21	255	3.7						3.2
22	265	3.2						3.2
23	270	2.9						3.2

Time: 75°W

Median values.

Table 20

San Francisco, Calif. (37.4°N, 122.2°W)

March, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	3.2						3.0
01	270	3.3						3.0
02	280	3.2						3.0
03	270	3.3						3.1
04	270	3.3						3.0
05	265	3.3						3.1
06	260	3.3						3.1
07	250	4.9	245	2.8	120	2.0	2.7	3.3
08	250	5.9	230	3.7	120	2.4	3.3	3.3
09	270	6.6	220	3.9	120	2.7	3.4	3.2
10	280	6.8	215	4.1	120	3.0	3.7	3.0
11	300	7.3	200	4.2	120	3.2	3.5	3.0
12	300	7.4	200	4.3	120	3.3		3.1
13	290	7.5	220	4.2	120	3.3		3.2
14	280	7.4	220	4.2	120	3.2		3.2
15	260	7.0	240	4.0	120	3.0	3.4	3.2
16	265	6.7	240	3.8	120	2.7	3.3	3.3
17	250	6.4	240	3.2	120	2.3	2.6	3.3
18	235	6.2						3.2
19	230	4.7						3.2
20	240	3.9						3.2
21	260	3.5					2.4	3.1
22	260	3.3					1.9	3.1
23	260	3.3						3.1

Time: 120°W

Length of time sweep: 0.8 Mc to 12 Mc in six minutes. Record centered on the hour.

Median values.

Table 21

Baton Rouge, Louisiana (30.5°N, 91.2°W)

March, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	fWs	P2-H3000
00	295	3.4						2.9
01	290	3.4						2.9
02	290	3.4						3.0
03	280	3.3						3.0
04	280	3.2						2.9
05	295	3.1						3.1
06	270	3.4						3.1
07	250	5.3			130	2.1		3.3
08	280	6.0	240	3.7	130	2.5		3.3
09	290	6.2	230	4.3	120	2.8		3.1
10	300	6.5	220	4.5	120	3.1		3.1
11	310	7.0	220	4.5	120	3.2		3.0
12	300	7.6	240	4.5	120	3.2		3.0
13	300	8.0	240	4.6	120	3.2		3.1
14	300	7.8	240	4.5	120	3.2		3.0
15	290	7.7	240	4.4	120	3.1		3.1
16	280	7.4	250	3.9	120	2.8		3.1
17	250	7.1			130	2.2		3.2
18	240	6.6						3.3
19	240	5.0						3.2
20	250	4.0						3.1
21	290	3.5						2.9
22	300	3.5						2.9
23	300	3.5						2.9

Time: 90°W

Length of time sweep: 1.9 Mc to 9.6 in three minutes thirty seconds.

Median values.

Table 23

(Additional corrections to previously published provisional data)

Fairbanks, Alaska (64.5°N, 147.8°W)

February, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	fWs	P2-H3000
00							3.6	2.9
01	315						3.5	
02	335						3.6	
03	332						3.6	
04	335						3.6	
05	338						3.2	
06	368						3.1	
07							2.4	
08							2.1	
09							2.8	
10	245		215				2.5	
11		5.1	222				2.3	
12		5.4						
13	235							
14								
15								
16								
17							1.6	
18							2.9	
19	235						3.0	
20	278						3.0	
21							3.0	
22	295						3.2	
23	305						3.2	

Time: 150°W

Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Median values.

Table 22

San Juan, Puerto Rico (18.4°N, 66.1°W)

March, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	fWs	P2-H3000
00		3.7						2.9
01		3.8						2.9
02		4.0						3.0
03		3.8						3.2
04		3.1						3.2
05		3.2						3.1
06		4.7						3.2
07	285	6.0						3.1
08	290	6.4	250	3.5				3.1
09	310	7.1	250	4.4				3.1
10	310	7.1	240	4.5				3.0
11	300	8.7	250	4.6				3.0
12	300	9.0	250	4.6				2.9
13	300	9.2	250	4.5				3.0
14	300	9.2	250	4.5				3.0
15	290	8.8	250	4.4				3.0
16	290	8.3	250	4.2				3.1
17	270	8.2	250	3.7				3.1
18	275	7.0						3.2
19	280	6.2						3.1
20		5.1						3.0
21		4.3						2.9
22		4.2						2.8
23		4.0						2.8

Time: 60°W

Length of time sweep: 2.7 Mc to 11.4 Mc in twelve minutes. Record centered on the hour.

Median values.

Table 24

(Corrections and additions to previously published provisional data)

Reykjavik, Iceland (64.1°N, 21.7°W)

February, 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	fWs	P2-H3000
00							3.4	
01							3.4	
02							3.5	
03							3.4	
04								
05								
06								
07								
08								3.3
09								3.5
10								3.5
11								3.4
12								
13	215							
14								3.4
15								
16								3.3
17		4.4						3.3
18		2.9						
19								
20							3.0	
21							3.6	
22							2.4	
23							4.2	

Time: 15°W

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 25

(Additions and corrections to previously published provisional data)
Churchill, Canada (58.5°N, 94.2°W)
February 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	f°E
00	330						5.6
01	290	3.6					4.0
02	290	3.0					3.8
03	310	3.3					3.6
04							3.0
05							3.7
06							4.6
07	310	2.9					4.1
08	275						3.8
09	290	4.3	240	3.1	120	2.7	
10	275	4.8	230	3.3	120	2.9	
11	290		235	3.4	110	2.7	
12	290		250	3.6	120	2.6	3.5
13	285		240	3.8	120	2.7	
14	280	5.8	230	3.6	125	2.8	
15	265	6.0	230	3.6	126	2.7	
16	250		240	3.1	130	2.6	
17	240				120	2.6	
18	250				130	2.7	
19	280						2.8
20	290	3.6					3.8
21	300						4.0
22	300	3.6					4.2
23	320	3.6					4.8
							5.6

Time 90°W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Median values.

Table 27

(Additions and corrections to previously published provisional data)

Mau, Hawaii (20.9°N, 156.5°W)
February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	f°E
00							
01	260						
02	245						
03	240	3.3					3.5
04	220						3.6
05							
06							
07							
08						2.4	
09							
10							
11			185		110		
12					105		
13	285				105		
14					105		4.4
15					105		4.7
16					105		4.6
17	235	10.6					4.6
18						2.5	3.5
19	205	7.2					
20		3.8					
21							
22							
23							

Time 150°W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Median values.

Table 26

(Additions and corrections to previously published provisional data)

Slough, England (51.5°N, 0.6°W)
February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	f°E
00							
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Time 0°

Length of time sweep: Mammal operation.

Mean values of M-3000.

Median values of F2, F1, F0.

Slough, England (51.5°N, 0.6°W).

Noon F0F2 = 6.5 Mo.

Median value.

Table 28

Trinidad, Brit. West Indies (10.6°N, 61.2°W)
February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	f°E
00	290	3.3					
01	270	3.1					
02	240	3.4					
03	220	3.8					
04	230	2.8					
05	292	2.5					
06	270	2.6					
07	240	5.2					
08	250	6.0					
09	298	6.9					
10	300	8.0					
11	300	8.2					
12	305	8.7					
13	305	8.5					
14	305	8.4					
15	305	9.3					
16	300	9.9					
17	265	9.9					
18	205	9.0					
19	220	7.3					
20	220	4.9					
21	270	3.6					
22	300	3.0					
23	300	3.6					

Time 60°E.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Median values.

Table 30

(Additions and corrections to previously published provisional data)

Huancayo, Peru (12.0°S, 76.30°W) February, 1945									
Time	h'F2	f°F2	h'F1	f°F1	h'F1	f°F1	f°E	f°E	F2-M3000
00									3.0
01									3.2
02									3.1
03									3.2
04									3.3
05									3.3
06	255								
07									2.5
08									3.2
09									3.2
10									5.5
11									5.5
12									2.6
13									5.5
14									2.6
15									5.5
16									5.5
17									5.5
18									4.5
19									2.6
20									
21	295								2.8
22									
23									3.0

Time: 76°W.
Length of time sweep: 16 to 0.5 Mc in fifteen minutes.
Median values.

Table 32

Pitcairn I. (25.0°S, 130°W) February, 1945									
Time	h'F2	f°F2	h'F1	f°F1	h'F1	f°F1	f°E	f°E	F2-M3000
00									
01	231	5.55							
02									
03									
04	279	3.87							
05									
06	246	7.26							
07									
08	296	8.02	219	4.72					
09									
10	312	10.50	198	4.61					
11									
12	281	10.50	215	4.64					
13									
14	268	9.92	223	4.43					
15									
16									
17									
18	267	6.47							
19									
20									
21	302	6.15							
22									
23									

Time: 150°W.
Length of time sweep: Manual operation.
Median values.

Table 23

Christmas I. (2.0°N, 157.0°W) February, 1945									
Time	h'F2	f°F2	h'F1	f°F1	h'F1	f°F1	f°E	f°E	F2-M3000
00	250	5.6							3.4
01									
02									
03									
04									
05									
06	250								3.3
07	250	5.2							3.3
08	230	7.1							3.0
09	320	7.6	230	4.4					2.6
10	350	7.3	205	4.6					4.3
11	350	7.2	202	4.6					4.7
12	360	7.3	200	4.7					5.0
13	360	7.6	190	4.7					2.6
14	330	8.3	190	4.6					2.6
15	330	8.4	190	4.5					2.7
16	310	9.6	190						2.9
17	260	10.2	230						3.0
18	250	10.1							3.1
19	245	9.6							3.2
20	245	9.0							3.2
21	240	8.4							2.4
22	245	7.4							2.4
23	240	6.4							2.4

Time: 150°W.
Length of time sweep: Manual Operation.
Median values.

Table 31

Rarotonga I. (21.0°S, 159.6°W) February, 1945									
Time	h'F2	f°F2	h'F1	f°F1	h'F1	f°F1	f°E	f°E	F2-M3000
00									
01									
02									
03									
04									
05									
06									
07	305	3.94							
08	261	6.63							
09	308	6.40							
10									
11									
12									
13	313	12.30							
14									
15	259	11.20							
16									
17	293	9.71							
18									
19	261	8.23							
20	279	7.17							
21									
22									
23									

Time: 160°W.
Length of time sweep: Manual operation.
Median values.

Table 33

(Corrections to previously published provisional data)

Kennadec Is. (29.2°S, 177.9°E) February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fFa	F2-H3000
0010								
01								
02								
0310								
04								
05		3.84						
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
1850								
20								
21								
22								
23								

Time: Local.

Length of time sweep: 1.8 Mc to 12.8 Mc. Manual operation.

Mean values.

Table 35

(Corrections and additions to previously published provisional data)

Reykjavik, Iceland (64.1°N, 21.7°W) January, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fFa	F2-H3000
00							3.5	
01							3.4	
02							3.3	
03							3.1	
04	-	-					-	
05	-	-					-	
06	-	-					-	
07	-	-					-	
08	265	-					-	
09	225	2.6					-	
10							-	
11							3.5	
12		5.8					3.6	
13		5.6					3.6	
14		5.4					3.6	
15							3.6	
16							3.4	
17		4.0					3.3	
18	215						3.4	
19	-	-					-	
20	-	-					-	
21	-	-					3.3	
22	-	-					3.4	
23	-	-					3.4	

Time: 15°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 36

Campbell Is. (52.5°S, 169.0°E) February, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fFa	F2-H3000
00								
01								
02								
03								
04								
05	232	3.62						
06								
07	261	4.64	214	3.63	103	2.75		
08								
09	348	5.19	218	4.01	101	3.04		
10								
11	345	4.98	199	4.25	102	3.09		
12	319	5.49	205	4.33	100	3.30		
13			208	4.36	100	3.14		
14								
15	300	5.31	206	4.09	103	2.96		
16								
17	264	5.66	202	3.66	106	2.52		
18								
19	223	6.03						
20								
21	239	4.89						
22								
23								

Time: 165°E.

Length of time sweep: 1 Mc to 12 Mc. Manual operation.

Mean values.

Table 36

(Corrections to previously published provisional data)

Burghead, Scotland (57.7°N, 3.5°W) January, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fFa	F2-H3000
00								
01		2.2						
02		2.2						
03		2.0						
04		2.2						
05		2.0						
06		1.0						
07								
08		2.9						
09		4.4						
10		5.2						
11		5.9						
12								
13		6.3						
14		6.1						
15								
16								
17		4.3						
18								
19		3.0						
20		2.6						
21		2.4						
22		2.3						
23		2.1						

Time: 0°

Median values.

Table 37

(Additions and corrections to previously published provisional data)

Great Radnow, England (51.70°N, 0.50°E) January, 1945

Time	hF2	f _o F2	h'F1	f _o F1	h'E	f _o E	f _{max}	F2-M3000
00		2.99						
01		2.99						
02		2.93						
03		2.65						
04		2.45						
05		2.13						
06		1.94						
07		2.14						
08		4.44				1.60		
09		5.75				2.00		
10		6.14			3.1	2.25		
11		6.54			3.3	2.40		
12		6.69			3.5	2.60		
13		6.33			3.4	2.40		
14		6.30			3.4	2.20		
15		5.32				2.00		
16		5.26				1.70		
17		4.51						
18		3.50						
19		2.74						
20		2.63						
21		2.72						
22		2.80						
23		2.72						

Time: 0°

Length of time sweep: Annual operation.

Median values f_oF2, f_oF1, f_oE.Mean values f_oF2 = 3.03.

Slough, England (51.50°N, 0.30°E)

noon f_oF2 = 6.5

Median values.

Table 39

(Additions and corrections to previously published provisional data).

Christmas I. (2.08°N, 157.30°W) January, 1945

Time	hF2	f _o F2	h'F1	f _o F1	h'E	f _o E	f _{max}	F2-M3000
00								3.4
01								
02								
03								
04								
05								
06								
07		2.45					2.4	
08		2.23					3.4	
09		3.55					4.1	
10							4.6	
11							4.9	
12							5.4	
13							5.0	
14							4.6	
15							3.9	
16							3.6	
17							3.2	
18		2.45					2.6	
19								
20								
21								
22								
23								

Time: 150°E

Length of time sweep: Annual operation.

Median values.

Table 38

(Additions and corrections to previously published provisional data)

Trinidad, Brit. West Indies (10.60°N, 61.30°W) January, 1945

Time	hF2	f _o F2	h'F1	f _o F1	h'E	f _o E	f _{max}	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17							3.1	
18							2.8	
19							3.0	
20							2.6	
21								
22								
23								

305

Time: 60°W

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 40

Cape York, Q. Australia (11.08°S, 142.40°E) January, 1945

Time	hF2	f _o F2	h'F1	f _o F1	h'E	f _o E	f _{max}	F2-M3000
00	243	6.57						3.15
01	232	6.17						3.19
02	238	5.60						3.22
03	239	4.98						3.21
04	229	4.21						3.35
05	243	3.31						3.24
06	249	3.21						3.26
07	229	4.94						3.39
08	296	3.90			106	2.05		3.30
09	350	6.29			97	3.05		2.99
10	383	7.39			96	3.37		2.77
11	380	8.63			96	3.49		2.77
12	372	9.49			95	3.55		2.82
13	344	10.47			95	3.54		2.94
14	286	11.45			96	3.52		3.16
15	276	10.33			93	3.38		3.17
16	283	8.62			93	3.18		3.07
17	295	7.79			93	2.88		3.05
18	265	6.84			100	2.37		2.96
19	256	6.96						2.84
20	289	6.96						2.93
21	251	7.22						3.05
22	262	7.22						3.06
23	241	6.59						3.13

Time: 150°E

Mean values.

Table 41

(Corrections to previously published provisional data).

Simonstown, Union of S. Africa (33.90S, 18.70E)										January, 1945	
Time	h'F2	f'F2	h'F1	f'F1	h'E	f'OE	fEs	F2-M3000			
00											
01											
02											
03											
04		3.2							3.0		
05											
06		3.9							3.0		
07									3.2		
08											
09		6.1									
10											
11									2.8		
12											
13		7.7									
14		7.9							2.9		
15		8.1									
16		7.6									
17		6.7									
18											
19		5.5									
20											
21		5.2									
22											
23		3.9								3.0	

Time: 150W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Median values.

Table 43

(Additions and corrections to previously published provisional data)

Christmas I. (2.00N, 157.00W)

December, 1944

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'OE	f'Es	F2-M3000	
00									
01		-							-
02		-							-
03		-							-
04									
05									
06							2.8		
07							4.0		
08							4.5		
09							5.2		
10							5.4		
11							5.2		
12						3.55	5.0		
13							4.5		
14							4.4		
15							4.5		2.8
16							3.2		
17							2.8		
18							2.3		
19		2.45					1.9		
20		2.42							
21									
22		2.49							
23									3.2

Time: 150W.

Length of time sweep: Manual operation.

Mean values.

Table 42

(Additions and corrections to previously published provisional data).

Trinidad, Brit. West Indies (10.60N, 61.80W)

December, 1944

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'OE	f'Es	F2-M3000	
00									
01									
02								2.7	
03								2.7	
04									
05									3.1
06									
07									
08									
09									
10									
11			2.27						
12							3.36		
13									
14									
15									
16									
17									
18									
19									3.4
20									3.7
21									3.4
22									2.7
23									2.5

Time: 80W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Mean values.

(Additions and corrections to previously published provisional data)

Christmas I. (2.00N, 157.00W)

December, 1944

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'OE	f'Es	F2-M3000	
00									
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									

Time: 150W.

Length of time sweep: Manual operation.

Mean values.

Table 44

Cape York (11.00S, 142.00W)

December, 1944

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'OE	f'Es	F2-M3000	
00									
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									

Time: 150W.

Length of time sweep: Manual operation.

Mean values.

TABLE 45 IONOSPHERE DATA-I

Washington, D.C.
National Bureau of Standards
(Institution)

Ionosphere Station

Hourly values of f^oF_2 in MHz for March 1945
(Month)

Records measured by: M. R. R.
A. F.

RESTRICTED

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(240)	260	280	280	260	240	240	230	220	240	260	260	300	280	280	280	260	240	220	240	220	260	280	280
2	280	300	280	280	280	260	260	220	230	220	240	280	280	280	280	260	260	240	230	240	240	260	260	260
3	260	280	260	240	260	260	260	240	200	320	300	300	280	320	300	280	260	240	230	240	220	260	260	260
4	(280)	260	280	280	(260)	260	260	240	220	260	300	280	300	310	300	270	260	240	220	220	240	260	240	260
5	280	300	300	280	270	280	240	240	260	260	300	300	300	320	300	290	280	240	220	260	260	260	280	280
6	300	280	260	250	220	260	280	240	240	240	320	280	280	280	300	280	280	240	240	240	240	240	280	260
7	280	300	280	280	280	280	260	240	220	250	280	280	280	300	300	(280)	260	240	230	240	240	240	270	280
8	280	260	260	260	280	260	270	260	340	320	320	280	280	280	280	280	260	240	240	220	230	260	280	280
9	280	280	300	260	260	260	260	240	(240)	(280)	300	280	320	310	300	300	280	260	240	230	(240)	230	(280)	290
10	280	280	260	260	260	260	240	240	240	270	300	300	(300)	310	280	280	260	260	240	240	300	280	300	290
11	280	260	240	280	260	260	300	240	220	(340)	(460)	(480)	(480)	(410)	(480)	(400)	(380)	(280)	240	260	260	280	300	300
12	280	280	310	300	280	290	(280)	240	(290)	(280)	340	340	320	340	300	340	320	280	270	240	270	240	260	280
13	280	300	300	300	300	(320)	320	250	(330)	320	360	300	300	290	320	300	270	250	240	240	260	260	270	280
14	260	260	280	280	260	240	260	240	220	240	280	290	290	280	290	280	270	250	240	230	280	300	(320)	340
15	300	280	260	260	320	(360)	320	270	360	380	380	540	400	290	330	340	330	280	260	260	280	280	280	270
16	260	260	280	260	280	280	280	250	280	320	320	360	340	320	340	300	280	270	240	240	240	280	300	260
17	260	260	260	280	280	(300)	280	220	220	260	340	320	300	300	320	280	280	240	240	240	260	260	260	290
18	260	260	260	240	240	280	260	220	260	270	300	300	280	320	300	280	280	260	200	240	240	260	240	260
19	260	280	290	280	260	280	260	260	260	260	300	350	330	300	300	290	280	260	240	220	220	260	260	280
20	260	260	260	260	260	270	260	250	240	280	280	320	320	320	300	300	340	260	230	230	220	240	260	300
21	290	300	300	280	(280)	260	260	240	260	300	290	300	300	300	300	300	260	270	240	220	240	270	280	280
22	300	280	280	260	260	270	260	240	280	300	300	310	280	300	300	280	280	260	240	260	(250)	260	260	260
23	260	260	270	280	280	270	260	220	260	340	360	350	320	300	300	300	(290)	280	260	240	240	260	260	260
24	260	260	280	280	260	260	280	240	280	280	300	330	360	320	340	320	290	280	260	240	280	260	280	260
25	260	260	260	260	260	250	250	240	260	300	320	300	300	320	310	290	300	220	260	240	280	300	280	280
26	260	280	260	280	260	400	300	250	220	400	520	G	620	420	380	460	360	(360)	270	280	280	260	280	280
27	280	280	280	260	290	280	300	240	360	(420)	580	(500)	380	360	400	360	320	320	260	250	250	250	260	300
28	290	300	280	320	340	300	300	280	G	G	G	G	G	G	G	G	540	410	280	260	260	260	260	300
29	320	340	300	320	300	320	260	230	260	320	380	380	360	360	340	340	340	300	260	240	240	250	270	280
30	280	280	280	280	280	(280)	260	260	260	250	260	(280)	300	300	300	300	290	260	240	220	240	260	260	260
31	260	250	260	260	260	260	240	240	240	260	310	310	300	300	300	300	280	280	250	220	240	240	260	260
SUN																								
Median	280	280	280	280	260	270	260	240	260	280	300	310	300	300	300	300	280	260	240	240	240	260	270	280

Washington, D.C.

Ionosphere Station

TABLE 46
IONOSPHERE DATA--2National Bureau of Standards
(Institution)Hourly values of f^oF_2 in Mc for March 1945
(Month)

Records measured by: M. D. A. F.

RESTRICTED

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.9	2.8 F	2.7 F	2.8	2.7	3.0	2.5 F	4.1	5.1	6.6	4.4	2.2	6.8	6.8	7.4	7.5	7.3	7.2	6.2	5.4	3.8	2.9	2.5	2.3
2	2.2	2.1 F	2.1 F	2.2	2.1	2.3 F	2.4	1.2	5.6	5.8	16.0	1.1	7.0	7.0	7.6	7.0	7.2	7.2	6.4	5.7	4.8	4.2	3.9	3.7
3	3.7	3.7	3.5	3.0	2.6	2.6	2.5	3.9	4.3	4.9	5.5	5.9	6.6	6.7	6.7	7.1	6.5	6.2	5.7	4.9	4.6	3.4	3.1	2.9
4	2.7	(2.4)	2.3	2.7	2.1 F	2.8	3.0	4.4	4.8	5.1	5.4	5.8	6.0	6.2	6.4	6.6	6.0	6.2	5.9	4.8	4.8	4.2	3.5	2.9
5	2.6	2.5 F	2.8	3.0	3.1	3.3	3.4	4.9	5.5	5.5	6.0	6.1	6.6	6.8	7.8	7.8	(7.8)	7.0	5.4	5.2	4.2	3.6	3.2	3.1
6	3.0	3.1	3.2	3.5	3.4	2.1	2.2	4.6	5.4	5.4	5.8	(6.3)	(7.4)	7.3	7.6	7.6	7.3	7.3	6.4	6.0	4.6	3.5	3.3	3.0
7	2.7	2.6	2.5 F	2.4 F	2.3 F	2.2 F	2.2 F	4.0	5.0	(5.8)	5.8	6.3	(6.8)	6.9	6.2	(6.7) K	7.0	6.7	6.0	5.3	4.6	4.0	3.5	3.3
8	(3.2) F	3.3	(3.1)	3.0	2.9	2.7 F	2.6 F	3.8	4.6	5.0	5.4	1.4	6.7	7.1	6.9	6.4	5.6	6.0	6.6	6.4	4.6 F	(3.6) F	(3.5) F	2.6 F
9	2.2 F	2.3 F	2.2 F	2.1 F	2.1 F	2.3 F	2.2 F	3.6	4.2	4.6	5.3	5.4	5.4	6.2	6.0	6.4	6.9	6.6	6.3	5.4	4.7	3.7 F	(3.2) F	(2.8) F
10	2.6 F	(2.4) F	2.8 F	2.7 F	2.8 F	2.9 F	3.0 F	4.7	5.6	5.7	5.9	6.1	(6.5) K	6.7	7.0	7.2	6.9	6.4	6.2	5.3	(4.2) F	C	C	C
11	C	C	(3.3)	(2.4) K	2.6 K	2.4 K	2.0 K	(3.2) K	4.5 F	4.5 F	4.5 F	4.2 K	(4.6) K	(5.4) K	(4.8) K	5.2 K	(4.7) K	4.9 K	C K	C K	C	(2.9) K	(2.5) K	(2.6) K
12	(2.3) K	(2.1) K	1.5 F	(1.2) K	(1.0) K	2.0 K	(1.7) K	4.3 K	5.5 F	(5.5) F	5.7 K	6.2 K	6.8 K	7.4 K	8.2 K	7.8 K	(8.7) K	(8.8) K	(5.8) F	5.6 K	3.9 K	(2.7) K	(2.2) K	(2.0) K
13	(1.7) K	(2.2) K	2.1 K	2.0 K	1.8 K	(1.6) K	(1.8) F	(1.8) F	4.2	4.6	5.4	5.8	(6.1)	5.6	5.4	5.8	5.6	6.0	5.8	5.2	4.7	4.0 F	3.7 F	3.5 F
14	3.2 F	2.6 F	2.6 F	2.5 F	2.4 F	2.3	2.4	4.6 K	5.1 F	5.4	6.8	7.5	7.4	7.5	6.4	6.7	6.3	6.4	6.8	6.6	4.7	4.4 K	(4.0) K	4.0 K
15	4.0 K	3.5 K	(2.7) K	(1.9) K	1.5 F	1.4 F	2.0 F	3.7 K	4.3 K	4.6 K	4.9 K	4.7 K	5.4 K	5.2 K	5.0 K	5.4 K	5.4 K	4.9 K	5.0 K	4.4 K	4.6 K	(4.5)	4.4	4.3
16	2.7 F	3.3 F	2.8 F	2.6 F	2.4 F	1.9 F	2.2 F	3.9	4.9	5.1	5.5	5.3	5.8	6.0	5.9	5.8	5.4	5.4	5.0	4.7	3.7 F	3.4 F	3.3 F	3.0 F
17	2.6 F	2.3 F	2.4 F	2.1 F	1.8 F	(1.8)	(2.5)	3.9	4.5	5.4	5.6	5.4	6.2	6.3	6.3	6.4	6.2	5.9	5.2	4.9	4.1	3.9	3.7	3.3 F
18	3.2 F	2.8 F	2.5 F	2.2 F	2.1 F	1.8 F	2.4 F	5.2	5.3	5.6	6.4	6.8	6.6	6.0	6.6	6.9	7.0	6.4	6.4	5.5	4.6	4.3	3.7	3.5
19	2.8 F	2.2 F	2.0 F	2.1 F	2.2 F	2.1 F	2.2 F	4.4	5.4	5.8	5.6	5.7	5.9	6.2	6.0	6.4	6.1	6.2	6.4	5.8	4.0	3.7	3.2	3.1
20	3.1	2.8	2.7	2.4 F	2.2	2.5	2.8	4.6	5.0	5.1	5.4	5.7	6.3	6.3	6.9	7.0	7.0	7.0	7.2	6.8	4.7	3.9	3.3	2.6
21	2.2 F	2.1 F	2.3 F	2.2 F	2.1 F	(1.9) F	2.8 F	4.6	5.1	5.5	6.4	6.5	6.4	6.4	6.4	7.2	6.4	6.3	6.0	5.4	4.5	3.7	3.5	3.4
22	3.3 F	2.9 F	2.7 F	2.5 F	2.3 F	2.3 F	3.9	4.6	5.2	5.6	5.8	6.2	6.8	6.5	6.9	6.5	6.2	6.2	6.2	5.7	4.9	4.5	3.8	3.4 F
23	3.0 F	2.7 F	2.4 F	2.3 F	2.1 F	2.4 F	3.0 F	4.4	4.7	5.0	5.1	5.5	6.2	6.2	6.0	5.5	5.5	5.5	5.4	5.2	4.7	4.0 F	3.7 F	3.2 F
24	2.8 F	2.6 F	(2.2) F	2.8 F	(2.2) F	(1.9) F	2.8 F	4.5	5.5	6.0	6.2	5.8	5.4	6.0	5.9	6.0	6.2	5.8	6.0	5.8	5.3	4.8 F	(4.2) F	4.0 F
25	(3.6) F	3.5 F	3.2 F	3.0 F	3.0 F	3.1 F	3.6 F	5.0	5.5	5.8	5.8	6.5	(6.1)	6.0	6.2	6.0	5.8	5.9	6.0	6.0	5.5	5.3	5.0 K	5.0 K
26	3.8 K	3.3 K	3.0 K	2.0 K	1.7 F	(1.3) F	2.3 K	3.5 K	4.2 K	4.4 K	4.4 K	4.4 K	4.4 K	5.0 K	4.9 K	4.4 K	4.5 K	4.6 K	4.2 K	4.0 K	3.8 K	3.8 K	(3.5) K	(2.4) K
27	2.2 K	2.1 K	(2.1) K	2.1 K	2.2 K	2.3 K	2.8 K	4.1 K	4.5 K	4.3 K	4.5 K	4.7 K	5.1 K	5.4 K	5.0 K	5.4 K	5.4 K	5.1 K	5.3 K	5.3 K	4.9 K	4.3 K	3.5 K	3.2 K
28	3.2 K	2.7 K	2.6 K	2.2 K	2.0 K	1.6 K	2.3 K	3.0 K	4.3 K	4.3 K	4.5 K	4.8 K	5.1 K	4.4 K	4.0 K	4.3 K	4.1 K	4.1 K	4.1 K	3.9 K	3.3 K	2.2 K	(1.7) K	(1.7) K
29	1.8 K	(1.8) K	(1.7) K	1.4 K	(1.3) K	1.6 K	3.3 F	4.4	4.4	4.4	5.1	5.3	5.7	5.6	5.7	5.4	5.3	5.5	5.5	5.0	4.6	4.0	3.5 F	3.3 F
30	2.9 F	2.6 F	2.2 F	2.1 F	1.7 F	1.6 F	3.3	(5.5)	6.0	7.2	6.0	(6.3)	6.8	6.6	6.7	6.7	6.4	6.6	6.5	5.5	4.5	3.9	3.8 F	3.5 F
31	3.3 F	3.3 F	2.7 F	2.4 F	2.3 F	2.3 F	3.8 F	5.4	6.0	6.6	(6.7)	(6.4)	6.8	7.1	7.2	6.8	6.6	6.6	6.7	6.6	5.5	4.7	4.3 F	4.3
Mean	2.9	2.6	2.6	2.4	2.2	2.2	2.5	4.4	5.0	5.4	5.6	5.9	6.3	6.3	6.4	6.5	6.2	6.2	6.0	5.4	4.6	3.9	3.5	3.2

TABLE 47

IONOSPHERE DATA-3

Washington, D. C.

Ionosphere Station

National Bureau Of Standards

(Institution)

Half Hourly values of f^oF_2 for March 1945
(Month)Records measured by: M. R. R.
A. F.

RESTRICTED

TIME: 75°W MERIDIAN

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
1	2.8	2.7	2.8	2.8	2.8	2.6	3.2	5.4	6.2	6.5	6.6	6.3	6.9	7.3	7.0	7.2	7.2	7.2	5.5	4.4	3.4	2.7	2.4	2.4
2	2.2	2.2	2.2	2.3	2.3	2.4	3.5	5.1	6.0	5.9	6.2	6.8	7.0	7.5	7.2	7.2	7.0	7.2	6.4	5.2	4.3	4.1	3.9	3.5
3	3.6	3.6	3.4	2.8	2.6	2.6	3.4	4.2	4.8	5.3	5.6	6.2	6.4	6.7	6.8	(6.8)	6.7	6.0	5.3	5.0	4.0	3.3	3.1	2.8
4	2.6	2.2	2.4	2.6	2.8	2.7	3.6	4.6	5.0	5.4	5.4	5.8	6.2	6.4	6.4	6.2	6.6	6.3	5.5	5.0	4.4	3.9	3.1	2.8
5	2.6	2.7	2.8	3.0	3.1	3.2	3.8	5.1	5.7	5.6	6.2	6.7	(6.7)	7.6	7.5	8.2	7.5	6.5	5.1	5.0	4.0	3.4	3.1	3.1
6	3.0	3.2	2.9	2.9	2.4	2.1	3.4	5.4	6.2	(5.8)	(6.8)	7.0	7.2	7.4	7.2	7.7	7.6	6.8	6.2	5.4	4.0	3.3	3.2	2.9
7	2.7	2.5	2.4	2.4	2.2	2.1	3.1	4.5	5.3	5.4	5.9	6.9	6.6	6.7	(6.7)	7.0	6.9	(6.2)	5.2	4.9	4.5	3.7	3.5	3.2
8	3.3	3.1	3.0	2.9	2.9	2.7	3.3	4.2	4.9	5.4	7.2	6.8	7.4	7.0	6.7	5.9	(5.8)	6.4	6.6	5.2	3.9	(3.4)	2.6	2.7
9	2.2	(2.3)	(2.2)	2.3	2.3	2.3	2.8	3.8	4.5	5.0	5.5	5.8	5.9	6.2	6.2	6.5	6.8	6.4	5.8	5.1	4.1	3.4	(2.9)	2.6
10	2.6	2.7	2.7	2.8	2.8	2.8	3.9	5.3	5.5	5.6	(6.0)	6.5	6.8	(7.3)	6.8	6.9	6.7	5.9	5.6	4.7	C	C	C	C
11	C	(3.5)	2.6	2.3	1.8	(1.4)	(2.7)	(3.3)	(4.3)	(4.3)	(4.7)	(4.6)	4.9	(4.7)	5.1	5.0	(4.8)	(4.7)	C	C	(3.4)	(2.8)	2.6	(2.3)
12	(2.6)	(2.7)	(1.3)	(1.2)	(1.6)	(2.3)	(3.3)	(5.4)	5.4	5.4	6.4	6.5	7.2	8.0	7.6	8.0	9.6	(8.7)	6.0	4.1	(3.6)	(2.3)	(2.2)	1.8
13	(1.9)	(2.2)	(2.0)	(1.9)	(1.8)	(1.6)	3.0	4.2	(4.4)	(4.8)	5.6	5.6	5.9	5.6	5.1	5.4	5.7	(6.0)	5.4	4.7	4.5	3.9	3.6	3.3
14	2.9	2.6	2.6	2.6	(2.4)	2.0	3.6	5.1	5.5	6.4	7.0	(7.6)	7.7	7.0	6.4	6.4	6.3	6.6	6.8	5.4	4.7	(4.3)	4.0	4.2
15	3.6	(3.6)	(2.3)	(1.6)	(1.5)	1.7	3.0	3.9	4.6	4.9	(4.7)	5.0	5.4	5.6	5.2	5.1	5.4	4.9	4.9	4.2	4.8	4.5	4.2	3.9
16	3.4	2.9	2.9	2.2	2.1	1.9	3.4	4.3	5.1	5.4	5.4	5.6	6.0	(6.2)	5.7	5.4	5.4	4.8	4.1	(3.4)	3.3	3.2	3.2	2.7
17	2.4	2.4	2.2	2.0	1.8	1.9	3.4	4.3	4.7	(5.3)	5.4	6.0	6.3	6.2	6.5	6.4	(6.0)	5.6	4.8	4.3	4.1	3.9	3.6	(3.3)
18	3.0	2.7	(2.5)	2.2	1.9	1.9	4.0	4.9	5.4	6.0	6.6	7.1	6.2	(6.5)	6.8	7.2	7.0	6.4	6.0	(5.0)	4.5	4.2	3.5	3.1
19	2.3	2.1	2.1	2.1	2.2	2.1	3.7	4.9	5.6	6.0	5.6	(5.8)	6.0	(6.2)	6.0	6.3	6.0	6.4	6.1	5.0	3.9	(3.3)	3.0	3.1
20	2.9	2.7	2.4	2.5	2.2	2.2	3.9	4.9	5.1	(5.3)	(5.4)	(5.4)	6.2	6.8	7.0	6.6	(7.5)	7.7	6.8	6.0	4.3	3.4	2.9	(2.5)
21	2.1	2.3	2.6	2.6	2.0	1.6	3.9	4.9	5.3	6.2	6.2	6.7	6.7	6.4	6.7	7.4	6.3	6.3	6.2	4.8	4.0	3.5	3.6	3.4
22	3.2	2.7	2.6	2.4	2.3	2.3	3.9	4.8	5.4	5.7	6.0	6.5	6.8	6.5	6.7	6.3	6.3	6.2	5.7	5.3	4.5	4.3	3.8	3.2
23	2.8	2.6	2.3	2.4	2.3	2.3	3.9	4.7	4.9	5.4	5.4	5.7	6.0	(6.2)	6.0	5.5	5.5	5.5	5.4	4.8	4.3	3.8	3.3	(2.9)
24	(2.6)	(2.6)	1.8	1.8	(2.2)	2.2	4.0	5.2	5.7	6.0	6.1	5.6	5.8	5.8	5.9	6.2	6.0	5.8	5.8	5.5	5.1	4.3	4.0	3.8
25	(3.5)	3.4	3.2	3.0	3.1	3.2	4.4	5.2	5.5	5.9	6.3	6.4	5.8	5.8	6.2	5.8	6.0	5.8	6.2	5.9	5.5	5.0	5.0	4.6
26	3.6	3.2	2.6	(1.8)	1.7	1.7	3.2	3.8	4.1	4.4	4.5	4.5	4.8	5.0	4.4	4.5	4.4	4.5	4.5	3.8	4.0	3.7	3.3	2.3
27	(2.1)	(2.1)	2.0	2.2	2.4	1.9	3.7	4.2	4.5	4.7	4.6	5.0	5.0	5.3	4.9	5.5	5.1	5.1	5.7	5.3	4.6	3.8	3.5	3.4
28	3.0	2.7	2.2	2.1	2.0	1.7	2.7	3.4	3.4	3.7	3.8	4.0	4.0	4.1	4.2	4.2	3.9	4.0	4.1	3.6	(2.7)	1.8	(1.7)	(1.7)
29	(1.7)	(1.7)	(1.4)	1.3	(1.4)	1.8	4.4	4.9	4.7	(5.7)	5.4	5.6	5.6	5.7	5.4	5.6	5.5	5.5	5.3	5.0	(4.2)	3.7	3.4	3.1
30	2.7	2.3	2.2	1.8	1.7	1.7	4.6	(5.9)	6.8	6.4	6.4	6.4	6.6	6.7	6.6	6.4	6.5	6.6	5.9	4.9	4.1	3.8	3.8	3.4
31	3.3	2.9	2.7	2.3	2.3	2.6	4.5	5.5	6.0	6.2	6.4	6.4	6.6	7.1	7.1	6.6	6.5	6.7	6.7	6.0	5.3	4.7	4.4	4.2
Sum																								
Mean	2.8	2.7	2.4	2.3	2.2	2.1	3.6	4.9	5.3	5.4	5.9	6.2	6.2	6.4	6.4	6.4	6.3	6.2	5.7	5.0	4.2	3.7	3.4	3.1

Washington, D.C. Ionosphere Station

National Bureau Of Standards
(Institution)

Hourly values of $h'F_{1, \text{in}} \left\{ \begin{array}{l} \text{in} \\ \text{ft} \end{array} \right.$

March 1945
(Month)

IONOSPHERE DATA - 4

Records measured by: M. R. R.
A. F.

RESTRICTED

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										220	220	200	200	240	240	240								
2											220	210	220	(240)	(240)	220	220							
3										220	200	200	200	240	240	220	220							
4										220	220	220	240	230	220	220	240							
5									240	220	200	200	200	240	220	230	240							
6										220	240	(220)	180	240	220	220	210							
7										220	220	220	220	230	240	1530	240							
8									240	220	220	220	220	220	220	240	220	220						
9									(240)	200	200	200	220	230	220	240	220	240						
10									220	210	200	220	1540	240	(240)	(260)	240	240						
11								K	220	220	220	220	220	(240)	(240)	230	240	240						
12								K	240	(230)	200	240	240	240	260	230	240	K						
13									240	220	200	240	220	220	220	240	240							
14								K	240	200	(220)	220	200	240	240	240	260	260						
15									220	220	220	220	220	220	220	220	250	240						
16										220	200	240	200	230	220	240	240							
17										220	220	220	230	200	220	220	260	240						
18									230	200	200	210	200	220	220	220	260	230						
19									220	200	200	200	240	200	220	220	220	240						
20									220	220	220	210	220	240	220	220	220	240						
21									220	220	220	210	220	240	220	220	220	240						
22									200	200	240	200	220	220	220	240	220	240						
23									240	220	220	220	200	220	220	220	220	240						
24									240	240	210	220	200	220	220	230	230	240						
25									220	220	220	220	220	220	220	220	220	240						
26								K	210	220	220	240	240	260	240	240	220	260						
27								K	220	220	220	220	260	220	240	220	240	240						
28								K	260	260	240	220	240	220	240	240	240	280						
29									220	220	210	220	220	200	220	240	220	240						
30								240	230	220	200	220	220	210	220	220	220	240						
31									220	240	210	200	200	200	220	220	240	240						
Sum									225	220	220	220	220	230	220	230	235	240						
Median																								

Washington, D.C.

(Location)

Ionosphere Station

TABLE 49
IONOSPHERE DATA-5

National Bureau of Standards
(Institution)

Hourly values of f^oF_1 for March 1945
(Month)

Records measured by: M.R.R.
A.F.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1											[4.1]	4.2	(4.3)	4.2	4.3	4.1								
2												4.3	4.4	4.2	4.1									
3										(3.8)	(4.2)	4.2	4.2	(4.4)	4.2	4.1								
4											4.2	4.2	4.3	4.3	4.4	4.0								
5										(3.9) ^H	4.2	4.2	[4.2]	4.3	4.3	4.1	3.8							
6											4.5	[4.5]	4.3 ^H	4.4	4.2	4.0								
7											(4.0)	4.3	4.3	4.3	4.2	[4.1] ^c								
8							3.6			3.9	4.2	4.3	4.4	4.4	4.2	4.0								
9									A	4.1	4.2	4.2	4.2	4.2	4.1	4.1								
10									3.9	[4.1]	(4.3)	4.3	4.3	4.3	C	C	C							
11									K	C	C	C	C	C	C	C	C	K						
12									C	C	C	4.3 ^K	4.4	4.4	4.4 ^K	4.4 ^K	4.0 ^K	K						
13											4.1 ^H	4.2	4.3	4.3	(4.2)									
14											4.2	4.4	4.4	4.4	(4.2)	(4.1)	H							
15									K	3.8 ^K	4.0 ^K	4.1 ^K	4.2 ^K	4.1 ^K	4.1 ^K	3.9 ^K	3.2 ^K							
16										(3.9)	4.1	4.2	4.3	4.2	4.1	4.0	(3.8)	3.3						
17										3.7	(4.0)	(4.2)	4.2	4.2	4.2	(4.0)	[3.8]							
18										4.0	4.2	4.3	4.4	4.3	4.2	4.2	3.8							
19										(3.6)	4.0	4.1	4.3	4.4	4.3	(4.2) ^H	4.2							
20										3.8	(4.1)	4.3	4.3	(4.2)	4.2	4.1	(4.0)	(3.5)						
21										3.5	4.0	4.2	4.4	4.4	4.3	4.1	3.7							
22										(4.0) ^H	4.2	4.4	4.4	4.4	4.3	4.1								
23										(3.6)	4.1	4.2	4.3	4.3	4.4	4.1	[3.8]							
24										3.8	4.1	4.2	4.2	4.3	4.4	4.1	3.9							
25										(3.7)	4.1	4.2	4.3	4.4	4.3	4.1	(3.8)							
26									K	3.9 ^K	4.1 ^K	4.0 ^K	4.1 ^K	4.1 ^K	4.1 ^K	3.4 ^K	3.8 ^K	K						
27										3.7 ^K	4.0 ^K	4.1 ^K	4.2 ^K	4.2 ^K	4.2 ^K	4.1 ^K	4.0 ^K	K						
28										3.3 ^K	3.6 ^K	3.8 ^K	3.9 ^K	4.0 ^K	4.0 ^K	3.9 ^K	3.8 ^K	3.4 ^K						
29										(4.0)	4.1	4.3	4.4	4.4	4.4	4.1	(4.0)	3.5						
30										(4.0)	4.2	4.4	[4.5]	4.5	4.4	4.3	4.0							
31										4.3	(4.7)	(4.5)	4.5	4.5	4.4	4.3	(4.1)							
Sum																								
Median							3.6			4.0	4.2	4.3	4.3	4.3	4.3	4.1	3.8	3.4						

RESTRICTED

Washington, D.C.

Ionosphere Station

TABLE 50
IONOSPHERE DATA--6

RESTRICTED

(Location)
National Bureau Of Standards
(Institution)Hourly values of f^oF_2 forMarch 1945
(Month)Records measured by: M.R.R.
A.F.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									120	120	120	110	130	130	120	120	130	120						
2									130	120	120	120	120	120	120	120	120	120						
3								40	120	120	120	120	120	120	120	120	120	140						
4								120	120	120	120	120	120	120	120	120	120	140						
5								140	120	120	120	120	120	120	120	120	120	120						
6								140	120	120	120	120	120	120	130	120	130	140	B					
7								120	120	120	120	110	120	120	120	120	120	130						
8								140	120	120	120	120	120	120	120	120	120	120						
9								120	120	120	120	120	120	120	120	120	120	130						
10								140	120	120	120	120	120	120	120	120	120	130						
11							K	120K	120K	120K	120K	120K	120K	120K	120K	120K	130K	140K						
12							K	120K	120K	120K	120K	120K	120K	120K	120K	120K	120K	140K						
13								120	120	120	120	120	120	110	110	120	120	130	100					
14								140	120	120	120	110	120	120	120	120	120	130						
15							K	130K	120K	120K	110K	120K	120K	120K	110K	120K	120K	120K	160K					
16								120	120	120	120	120	120	120	120	120	120	120	140					
17								120	120	110	120	120	120	120	120	120	120	120						
18								120	120	110	110	120	120	120	120	120	120	120						
19								140	120	120	120	120	120	120	120	120	130	140						
20								140	120	120	120	120	120	120	120	120	120	130	120					
21								120	110	120	120	120	120	120	110	120	120	120	140					
22								140	120	120	120	120	120	120	120	120	120	120	120					
23								120	120	120	120	120	120	120	120	120	120	120	140					
24								120	120	120	110	120	120	120	120	120	120	120	140					
25								120	120	120	120	120	120	120	120	120	120	120	140					
26							K	120K	120K	100K	120K	120K	120K	120K	120K	120K	120K	130K	140K					
27							K	120K	120K	120K	120K	120K	120K	120K	120K	120K	120K	120K	120K					
28							160K	130K	120K	120K	120K	120K	120K	120K	120K	120K	120K	120K	110K					
29							140	120	110	120	110	110	120	120	120	120	120	120	140					
30							140	120	120	120	120	120	120	120	120	120	120	120	140					
31							120	120	120	120	120	120	120	120	110	120	120	120	120					
Sum																								
Median							140	120	120	120	120	120	120	120	120	120	120	120	140					

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									[2.2] ^A	(2.7)	(3.1)	[3.2] ^A	3.3	[3.2] ^B	3.1	2.9	2.6	2.1						
2									2.3	2.7	3.1	3.2	(3.3)	[3.2] ^B	[3.2] ^B	3.0	2.7	2.1						
3									2.3	2.8	3.0	3.4	[3.3] ^B	[3.2] ^B	3.1	2.9	2.6	2.2						
4									(1.6)	2.2	2.8	3.0	[3.2] ^A	3.3	3.3	3.1	2.5	2.2						
5									1.6	2.3	2.8	3.0	3.2	3.3	3.2	2.9	2.6	(2.3)						
6									(1.6) ^F	(2.2)	2.8	[3.0] ^B	3.2	(3.2)	3.4	3.0	2.6	2.2	1.5					
7									(1.7) ^F	2.3	2.8	3.0	3.2	[3.2] ^A	(3.2)	3.1	[3.0] ^C	2.7	2.3					
8									1.8	[2.3] ^A	2.6	[2.9] ^A	(3.1)	(3.3)	3.2	(3.1)	2.9	2.7	(2.2)					
9									A	A	A	[3.3] ^B	3.3	(3.2)	3.2	2.9	(2.8)	(2.2)	A					
10									1.7	2.4	(2.8)	(3.0)	(3.2)	B	[3.3] ^C	3.1	2.7	A	C					
11									K	A	K	[2.3] ^B	(3.0) ^K	3.2	3.2	3.0	2.7	2.3	A	K				
12									K	A	K	A	K	3.1	3.2	3.0	2.6	2.1	(1.6) ^K					
13									A	A	A	(3.2)	3.3	(3.3)	(3.1)	3.0	2.6	2.2	A					
14									1.8	2.5	[2.8] ^A	[3.0] ^A	3.2	[3.2] ^A	(3.2)	(3.1)	3.0	2.6	(2.2)					
15									K	2.0	(2.5) ^K	[2.8] ^A	3.1	3.2	(3.2) ^K	2.9	(2.5) ^K	2.1	1.6					
16									[2.0] ^A	2.5	2.8	3.0	3.1	(3.2)	(3.2)	3.1	2.9	2.6	2.1	(1.7)				
17									(1.9)	2.4	2.7	3.0	3.2	(3.2)	(3.1)	3.0	2.6	(2.2)						
18									2.0	(2.4)	(2.7)	(3.0)	(3.2)	3.3	3.2	3.1	[2.7] ^A	2.3						
19									2.0	(2.3)	(2.6)	[2.9] ^C	[3.2] ^B	3.3	3.3	(3.2)	3.0	2.8	2.2	1.7				
20									(2.0)	2.5	2.8	3.1	(3.2)	3.2	(3.1)	3.0	2.6	(2.2) ^A	(1.9)					
21									[1.9] ^A	2.3	[2.7] ^A	[3.0] ^A	(3.1) ^A	(3.3) ^A	3.3	3.2	3.1	2.8	2.3	A				
22									A	A	(2.8)	3.1	3.3	3.3	[3.3] ^A	3.1	2.9	(2.3)	1.8					
23									2.0	(2.5)	2.8	(3.0)	(3.2)	(3.2)	(3.3)	3.1	2.8	(2.4)	(1.7)					
24									A	A	A	B	A	B	(3.3)	3.1	2.7	2.3	A					
25									(2.0)	[2.5] ^A	2.0	3.1	[3.2] ^A	3.3	[3.2] ^A	3.0	2.7	2.3	(1.6)					
26									K	(2.1) ^K	2.6	(3.2) ^K	3.2	3.2	3.0	3.0	2.7	2.3	(1.8) ^K					
27									K	2.1	2.4	2.9	(3.1) ^K	3.2	3.0	3.0	2.7	(2.3)	A	K				
28									(1.5) ^K	2.0	2.5	2.9	[3.2] ^A	3.2	3.0	3.0	2.7	2.3	1.8					
29									(1.6)	2.2	[2.6] ^A	2.4	3.2	(3.3)	3.2	3.1	2.7	2.4	1.9					
30									A	(2.3)	[2.7] ^A	3.2	(3.3)	3.4	3.3	3.2	2.9	2.4	1.8					
31									2.3	(2.4)	(2.6)	3.2	(3.3)	3.4	3.4	3.2	2.8	2.5	1.8					
Sun																								
Median									2.0	2.4	2.8	3.0	3.2	3.3	3.2	3.0	2.7	2.2	1.8					

RESTRICTED

TABLE 5C

IONOSPHERIC DATA—S

Washington, D.C. Ionosphere Station
National Bureau of Standards
(Location)
(Institution)

Hourly values of E_s (MUF) for March 1945
Records measured by: M.R.R. A.F.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.2 140		2.4 120	3.1 120	3.2 120	2.4 120			4.2 120	3.1 140	4.1 140	4.0 110	3.4 140	3.5 140	4.2 140	4.2 130	3.0 130	3.1 120	2.1 130	3.0 130				
2	2.9 120				2.9 120						C								3.2 120	2.4 120				
3		0.9 120	0.8 120	3.1 120		3.2 120	2.4 160			3.1 140			3.6 120			C								
4		3.0 110	2.8 120	3.1 160	3.0 120	3.2 120	4.0 130	3.0 120		3.0 140	3.6 140		C										2.9 120	2.9 120
5				1.9 120	2.9 120		2.3 140	4.0 120		3.1 120	3.6 140						2.3 140			2.4 140				
6	2.4 120			3.0 120	2.9 120	3.0 110	3.0 120	3.0 120					3.0 120				3.1 120	2.2 160		2.8 120	3.0 110	2.3 140		
7	3.1 140			3.0 110	2.3 120	2.3 120	3.4 130	3.4 130		3.4 120	4.3 120	3.3 120	3.4 140				3.4 140	3.4 140					2.4 120	
8	2.9 130	3.2 120	3.1 120	3.1 120	3.1 120	3.1 120	4.1 120	4.0 120		3.4 120	4.4 120	4.2 120					3.2 120	3.6 140	3.4 130	4.2 120	4.5 120	4.2 120	5.0 120	3.2 120
9	2.9 120	2.4 120	2.4 120	2.7 120			2.8 140	3.4 120		3.4 120			B				3.1 130	3.3 120	3.5 130					
10							3.0 130	3.1 120		3.3 120	3.1 120						3.1 120	3.1 140	3.1 140	2.6 130	3.1 120			2.5 110
11							3.4 140	3.4 120		3.4 120							3.1 120	3.1 140	3.1 140	1.8 120				2.5 110
12	3.3 120	3.8 110	3.7 120	3.3 120		3.2 180		3.4 120		3.4 120							3.0 130	3.3 130	3.1 140	2.7 100	2.5 150			2.9 120
13								3.9 120		3.8 120	3.8 120	3.8 140	5.4 120					3.0 180	2.8 160	2.4 140	2.7 100			2.7 120
14										3.7 100	2.9 140	C												
15							3.2 120	3.1 120																
16																								
17	2.4 110			2.3 120	4.8 140																			
18	4.4 120	2.4 120	4.3 120	4.0 120	4.0 110			3.0 130	3.0 120	3.0 120	3.1 120						3.4 120	3.1 120	3.1 130	3.1 100				
19								2.3 140	2.8 120	3.0 120		C					3.1 150	3.1 140	2.7 130					
20	3.1 120	3.4 120	4.3 120	4.1 110	3.6 120			2.4 120	3.8 120	3.8 120	3.1 120	4.0 120	3.6 130					2.4 120	1.8 140	3.2 120				3.6 120
21	4.4 120	4.0 120	3.0 120	3.0 120	3.0 120			2.3 120	2.9 120	3.1 120	3.1 140	3.4 120	4.3 120				2.4 120	3.4 130	3.0 120	2.4 120	5.2 120	3.6 120	4.3 120	
22									3.6 120	3.1 120	3.1 120	3.1 120	3.6 140							3.0 120	2.7 120	3.0 120	2.3 120	
23																								
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
Sum																								
Median																								

* Less than median f_oE_s , or less than lower frequency limit of apparatus.

TABLE 53 IONOSPHERE DATA -- 9

Washington, D.C. Ionosphere Station

National Bureau of Standards
(Institution)

Hourly values of F2-M1500 for March 1945
(Month)

Records measured by: M. R. R.
A. F.

RESTRICTED

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.1	2.0F	2.0F	2.0	2.1	2.1	(2.2)F	2.2	2.3	2.4	(2.2)	2.3	2.1	2.1	2.3	2.2	2.2	2.2	2.4	2.1	2.3	2.1	2.0	2.0
2	2.0	1.9F	1.9F	1.9	1.9	2.1F	2.2	2.3	2.5	2.4	2.1	2.2	2.1	2.1	2.3	2.1	2.1	2.2	2.1	2.0	2.0	1.9	2.0	2.0
3	2.0	1.9	2.0	2.0	2.0	1.9	2.0	2.2	2.2	2.0	2.1	2.0	2.0	2.0	2.2	2.1	(2.2)	2.1	2.2	2.0	2.1	2.2	2.0	2.0
4	1.9	(1.9)	1.9	1.9	2.0F	2.0	2.0	2.3	2.3	2.2	2.1	2.3	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.0	2.0	2.1	2.2	2.0
5	2.0	1.9F	1.9	1.9	1.9	1.9	2.0	2.3	2.2	2.4	2.1	2.1	1.9	1.9	2.0	2.1	(2.1)	2.2	2.2	2.0	2.0	2.0	1.8	1.9
6	1.8	1.9	2.0	2.0	2.0	1.9	2.1	2.2	2.4	2.3	2.1	2.2	(2.2)	2.1	2.1	2.1	1.9	2.2	2.1	2.2	2.2	2.0	2.0	1.9
7	1.8	1.8	1.9F	1.9F	1.9F	1.9F	1.9F	2.2	2.3	2.1	2.2	2.1	(2.2)	2.1	2.0	C	2.1	2.2	2.2	2.1	2.1	2.0	2.0	1.9
8	1.9F	1.9F	(2.0)	1.9	1.8	1.9F	1.9F	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.2	2.1	2.1	2.1	(2.1)F	(2.0)F	F	(2.0)F
9	(1.9)F	(1.7)F	1.7F	(1.8)F	(1.8)F	(1.9)F	(1.9)F	2.2	A	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.2	2.2	2.2	(2.2)F	(2.0)F	(1.9)F
10	(1.8)F	(1.8)F	(2.0)F	(2.0)F	(2.1)F	(2.1)F	2.2F	2.4	2.5	2.2	2.2	2.0	B	2.0	2.1	2.2	2.3	2.3	2.1	J	J	C	C	C
11	C	C	(2.3)	(1.9)F	(2.0)F	(2.1)F	(1.9)F	(2.0)F	C	J	J	C	J	(1.8)K	J	(1.8)K	J	J	C	C	C	(1.9)K	(1.9)K	(1.9)K
12	F	(1.9)K	(1.8)K	(1.9)K	(2.0)K	(1.9)K	(1.9)K	J	2.2	(2.2)K	2.0K	1.9K	1.8K	1.8K	2.0K	1.8K	1.8K	(2.0)K	(2.0)K	2.1K	2.0K	F	(1.9)K	F
13	F	(1.8)K	(1.8)K	(1.8)K	(1.9)K	(1.8)K	(2.0)K	(2.1)K	2.1	2.1	1.9	2.2	(2.1)	2.3	2.1	2.1	2.2	2.0	2.1	2.0	(1.9)K	(2.0)F	(2.0)F	(2.0)F
14	(1.9)F	2.0F	1.9F	2.0F	2.0F	2.1	(2.0)F	2.2H	2.4H	(2.0)	2.1	2.0	2.1	2.1	2.2	2.1	2.2	2.0	2.1	2.0	(1.9)K	1.8K	(1.6)K	(1.6)K
15	(1.8)K	(1.9)K	F	(1.8)K	(1.6)K	(1.6)K	(1.9)K	2.1K	1.9K	1.9K	1.9K	1.6K	1.8K	1.9K	2.1K	1.8K	2.0K	2.0K	2.0K	1.8K	1.8K	1.8	2.0	1.9
16	1.9F	(1.9)F	(1.9)F	(2.0)F	1.7F	(2.0)F	(2.0)F	2.2	2.0	2.1	2.0	1.9	2.0	2.0	2.2	2.1	2.0	2.2	2.1	2.0	2.0F	(1.9)F	(1.9)F	(1.9)F
17	(2.0)F	(2.0)F	2.1F	2.0	2.0	D	(2.0)	2.2	2.1	2.5	2.0	2.0	2.1	2.1	2.0	2.2	2.0	2.1	2.1	2.0	1.9	1.9	1.9	J
18	2.0F	(2.0)F	(2.0)F	(2.1)F	2.0F	(2.0)F	2.1	2.3	2.2	2.3	2.1	2.0	(2.2)	2.1	2.0	2.1	2.1	2.1	2.1	2.1	1.9	2.0	2.0	2.0
19	(2.0)F	(1.9)F	(1.9)F	(1.8)F	(2.0)F	(1.9)F	1.9	2.2	2.3	2.3	2.2	2.2	2.0	2.2	2.0	2.2	2.0	2.1	2.2	2.2	2.1	2.0	2.0	1.9
20	2.0	2.0	1.9	2.0F	2.1	1.9	2.1	2.3	2.4	2.3	2.3	(2.0)	2.0	1.9	2.0	2.0	1.8	2.0	2.1	2.0	2.1	2.1	2.0	2.0
21	(1.9)F	1.9F	(2.0)F	(2.0)F	(2.1)F	(1.9)F	2.0F	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.2	2.1	(1.9)	1.9	1.9
22	1.9F	(2.0)F	2.1F	2.0F	(2.0)F	(1.9)F	1.9F	2.2	2.2	2.0	2.2	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.1	1.9	2.0	2.0F
23	2.0F	(2.0)F	(2.0)F	2.0F	(2.0)F	(2.0)F	1.9F	2.2	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.2	2.0	2.0	2.0F	(2.1)F	(2.0)F
24	(2.0)F	2.0F	(1.9)F	(2.0)F	(2.0)F	(2.1)F	(2.1)F	2.1	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.0	1.9	(1.9)F	(1.9)F	(1.9)F
25	(1.9)F	(1.9)F	(2.0)F	(2.0)F	(2.0)F	(2.0)F	(2.0)F	2.5	2.3	2.1	2.1	2.1	(2.3)	2.1	2.0	2.1	2.1	2.0	2.0	2.1	1.8	1.7	1.8K	1.9K
26	1.9K	1.8K	1.9K	1.8K	F	F	(1.9)K	2.2K	2.2K	(1.8)K	1.6K	G	(1.7)K	1.8K	1.9K	1.7K	2.0K	1.8K	2.1K	1.8K	1.9K	1.9K	(2.0)K	(1.8)K
27	(1.8)K	(1.7)K	(1.7)K	(1.9)K	(1.8)K	(1.8)K	(2.0)K	2.1K	(1.9)K	(1.9)K	1.6K	(1.7)K	(1.9)K	2.0K	1.9K	1.9K	2.0K	2.0K	2.0K	2.0K	2.0K	2.0K	1.9K	1.7K
28	1.8K	1.7K	1.7K	1.7K	1.8K	(2.0)K	(2.0)K	2.2K	G	G	G	G	G	G	G	G	1.6K	1.8K	2.0K	2.1K	2.0K	(2.1)K	(1.9)K	(1.9)K
29	(1.7)K	(1.8)K	(1.8)K	(2.0)K	(1.9)K	(2.0)K	(2.1)K	2.3	(2.4)	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	(2.0)F	(1.9)F
30	(2.0)F	(1.8)F	(2.0)F	(2.0)F	(2.2)F	(2.0)F	2.3	(2.4)	2.3	(2.4)	2.4	(1.9)	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.1	2.0	(2.1)F	(2.2)F
31	(2.0)F	(1.9)F	(2.1)F	(1.8)F	(2.1)F	(2.2)F	(2.5)F	2.4	2.4	2.4	(2.2)	(2.1)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.9	2.0
Median	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.2	2.3	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9

TABLE 54

IONOSPHERE DATA--10

RESTRICTED

Washington, D.C. Ionosphere Station

National Bureau Of Standards

Hourly values of F2-M3000_{res} March 1955

Records measured by: M.R.R. A.P.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.1	3.0	3.0	3.0	3.2	3.1	(3.3)	3.3	3.3	3.5	(3.2)	3.3	3.2	3.1	3.4	3.2	3.2	3.2	3.5	3.2	3.4	3.1	3.0	3.0
2	3.0	2.9	(2.9)	2.9	2.9	3.1	3.2	3.4	3.6	3.5	(3.1)	3.3	3.1	3.1	3.4	3.1	3.2	3.3	3.2	3.0	3.1	2.9	3.0	3.0
3	3.0	2.9	3.1	3.0	3.1	2.8	3.1	3.3	3.3	3.0	3.2	3.0	3.0	3.1	3.2	3.2	(3.3)	3.1	3.2	3.0	3.1	3.2	3.0	3.1
4	2.9	(2.9)	2.9	2.8	3.0	3.0	3.0	3.4	3.3	3.2	3.2	3.4	3.2	3.1	3.1	3.3	3.2	3.2	3.3	3.0	3.1	3.1	3.2	3.1
5	3.0	2.8	2.8	2.8	2.8	2.9	3.0	3.4	3.3	3.5	3.2	3.1	2.9	2.9	3.0	3.2	(3.2)	3.2	3.2	3.0	3.0	3.1	2.8	2.9
6	2.8	2.9	3.0	3.0	3.0	2.9	3.2	3.2	3.5	3.4	3.1	3.3	(3.2)	3.2	3.2	3.1	2.9	3.3	3.2	3.3	3.3	3.0	3.0	2.9
7	2.8	2.8	2.9	2.9	2.9	2.9	2.9	3.3	3.4	3.1	3.2	3.2	(3.2)	3.2	3.0	C	3.1	3.3	3.2	3.1	3.1	3.0	3.0	2.9
8	(2.8)	2.9	(3.0)	2.8	2.8	3.0	3.0	3.1	3.2	3.2	3.0	3.0	3.0	3.0	3.2	3.0	3.2	3.1	3.2	3.1	(3.1)	(3.0)	F	(3.1)
9	(2.9)	(2.6)	(2.7)	(2.8)	(2.8)	(2.9)	(3.0)	3.3	3.3	3.2	3.3	3.2	3.1	3.1	3.1	3.0	3.1	3.2	3.2	3.2	3.2	(3.2)	(3.0)	(2.9)
10	(2.7)	(2.7)	(3.0)	3.0	(3.1)	(3.1)	3.2	3.5	3.6	3.3	3.3	3.0	3.1	3.1	3.2	3.2	3.3	3.3	3.2	3.2	J	C	C	C
11	C	C	(3.3)	(2.8)	(3.0)	(3.1)	(2.9)	C	C	J	J	C	J	J	J	(2.7)	J	J	C	C	C	(2.9)	(3.1)	(2.8)
12	F	(2.9)	(2.7)	(2.9)	(3.0)	(2.8)	(3.2)	J	3.3	(3.3)	3.0	2.8	2.7	2.8	2.9	2.7	2.8	(3.2)	(3.0)	3.1	3.0	F	(3.0)	F
13	F	(2.7)	(2.7)	(2.7)	(2.8)	(2.8)	(2.9)	(3.1)	3.1	(3.2)	2.9	3.2	(3.2)	3.4	3.1	3.2	3.2	(3.3)	3.3	3.1	(2.9)	(3.0)	(3.0)	(3.0)
14	(2.8)	3.0	2.9	3.1	3.0	3.1	(3.0)	3.2	3.4	(3.0)	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.2	3.1	(2.9)	2.7	(2.5)	(2.5)
15	(2.7)	(2.9)	F	(2.7)	(2.5)	(2.5)	(2.8)	3.1	2.9	2.9	2.9	2.4	2.7	2.8	3.2	2.8	3.0	3.1	3.0	2.7	(2.8)	(2.7)	3.0	2.9
16	2.9	(2.9)	(2.9)	(3.0)	2.6	(3.0)	(3.0)	3.2	3.0	3.1	3.1	2.9	3.0	3.0	3.2	3.2	3.0	3.2	3.1	3.1	3.0	(2.9)	2.9	(2.8)
17	(3.0)	(3.1)	3.1	3.0	3.0	B	(2.9)	3.3	3.1	3.5	3.1	3.0	3.2	3.2	3.0	3.3	3.0	3.2	3.2	3.0	2.9	2.9	2.9	J
18	3.0	(3.0)	(3.0)	(3.1)	3.1	(3.0)	3.1	3.3	3.3	3.4	3.1	3.0	(3.2)	3.1	3.0	3.1	3.1	3.2	3.1	3.1	2.9	3.0	3.0	3.0
19	(3.0)	(2.8)	(2.8)	(2.8)	(2.9)	2.9	2.9	3.3	3.3	3.4	3.3	3.2	3.0	3.3	3.0	3.2	3.1	3.1	3.2	3.3	3.1	3.0	3.1	2.8
20	3.0	3.0	3.0	3.0	3.1	2.9	3.2	3.3	3.4	3.3	3.4	(3.0)	3.0	3.0	3.0	3.0	2.7	3.0	3.1	3.0	3.2	3.2	3.0	3.0
21	(2.9)	2.8	(3.0)	(3.0)	(3.1)	(2.9)	3.1	3.3	3.2	3.1	3.2	3.2	3.1	3.2	3.0	3.1	3.3	3.1	3.2	3.2	3.1	(2.9)	2.9	2.9
22	2.9	(3.0)	3.1	3.1	(3.0)	(2.8)	3.1	3.2	3.3	3.0	3.3	3.1	3.2	3.2	3.1	3.3	3.2	3.1	3.1	3.1	2.9	2.9	3.0	3.0
23	3.0	3.0	(3.0)	3.0	(2.9)	2.9	3.1	3.2	3.3	3.1	3.0	3.1	3.0	3.1	3.1	3.2	3.1	3.2	3.2	3.0	3.0	3.1	(3.1)	(3.0)
24	(3.0)	3.1	(2.8)	(3.0)	(3.0)	(3.0)	(3.1)	3.1	3.3	3.2	3.1	3.0	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.1	2.8	(2.8)	(2.9)	(2.9)
25	(3.0)	(2.9)	(3.0)	(3.0)	(3.0)	(3.0)	(3.3)	3.5	3.4	3.2	3.1	3.2	(3.3)	3.1	3.0	3.2	3.1	3.0	3.0	3.1	2.7	2.6	2.8	2.9
26	2.9	2.8	2.9	2.7	F	F	(2.9)	3.2	3.2	(2.8)	2.4	G	(2.2)	2.8	2.9	2.6	3.0	2.8	3.1	2.7	2.9	2.9	(3.0)	(2.8)
27	(2.8)	(2.6)	(2.6)	(2.9)	(2.7)	(2.7)	3.0	3.2	(2.9)	(2.9)	2.4	(2.6)	(2.9)	2.9	2.8	3.0	3.1	2.9	3.0	3.0	3.0	3.0	2.9	2.6
28	2.7	2.6	2.6	2.6	2.7	(3.0)	3.0	3.1	G	G	G	G	G	G	G	G	2.4	2.6	2.9	3.0	3.1	3.1	(2.8)	(2.8)
29	(2.5)	(2.7)	(2.7)	(3.0)	(2.8)	3.0	(3.1)	3.4	(3.4)	3.0	3.0	2.9	3.0	3.0	3.0	3.0	2.9	3.0	3.1	3.0	2.9	2.9	(2.9)	(2.8)
30	(2.9)	(2.8)	(2.9)	(3.0)	(3.2)	(3.0)	3.3	(3.4)	3.4	(3.4)	3.4	(2.7)	3.0	3.1	3.1	3.1	3.0	3.2	3.3	3.3	3.1	3.0	(3.1)	(3.2)
31	(3.1)	(2.9)	(3.1)	(2.8)	(3.0)	(3.1)	(3.5)	3.4	3.4	3.4	(3.3)	(3.1)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	2.9	2.9	2.9	3.0
Sum																								
Median	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.3	3.3	3.2	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.0	3.0	3.0	2.9

Washington, D. C.

Ionosphere Station

National Bureau of Standards

(Institution)

TABLE 55

IONOSPHERE DATA--II

Hourly values of F2-M3500 for March 1945
(Month)Records measured by: M.R. E.
A.F.

RESTRICTED

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.2	3.2 ^F	3.2 ^F	3.1	3.3	3.3	3.3 ^F	3.4	3.4	3.7	(3.4)	3.5	3.4	3.3	3.5	3.4	3.4	3.4	3.6	3.4	3.5	3.3	3.2	3.2
2	3.2	3.1 ^F	(3.1) ^F	3.1	3.1	3.3 ^F	3.4	3.5	3.7	3.6	3.3	3.5	3.2	3.3	3.6	3.3	3.4	3.5	3.3	3.2	3.2	3.1	3.2	3.2
3	3.2	3.1	3.2	3.2	3.3	3.0	3.3	3.5	3.5	3.2	3.4	3.5	3.2	3.2	3.4	3.3	(3.5)	3.3	3.4	3.2	3.2	3.4	3.2	3.3
4	3.1	(3.1)	3.1	3.0	3.2 ^F	3.2	3.2	3.5	3.5	3.4	3.4	3.5	3.4	3.3	3.3	3.4	3.4	3.4	3.4	3.2	3.2	3.3	3.4	3.3
5	3.2	3.0 ^F	3.0	3.0	3.0	3.1	3.2	3.6	3.5	3.7	3.4	3.3	3.1	3.1	3.2	3.3	(3.4)	3.4	3.4	3.2	3.2	3.2	3.0	3.0
6	3.0	3.1	3.2	3.2	3.1	3.1	3.4	3.4	3.7	3.5	3.3	3.5	(3.4)	3.4	3.3	3.3	3.1	3.5	3.4	3.5	3.5	3.2	3.2	3.1
7	3.0	3.0	3.1 ^F	3.1 ^F	3.1 ^F	3.1 ^F	3.1 ^F	3.4	3.5	3.3	3.4	3.3	(3.4)	3.3	3.2	C	3.3	3.4	3.4	3.3	3.3	3.2	3.2	3.1
8	(3.1) ^F	3.1 ^F	(3.2)	3.0	3.0	3.1 ^F	3.1 ^F	3.3	3.4	3.4	3.2	3.2	3.2	3.3	3.3	3.2	3.4	3.3	3.4	3.3	(3.3) ^F	(3.2) ^F	F	(3.3) ^F
9	(3.1) ^F	(2.8) ^F	(2.8) ^F	(2.9) ^F	(3.0) ^F	(3.1) ^F	(3.1) ^F	3.5	A	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.3	3.4	3.4	3.4	3.4	(3.4) ^F	(3.2) ^F	(3.1) ^F
10	(2.9) ^F	(2.9) ^F	(3.2) ^F	(3.2) ^F	(3.3) ^F	(3.3) ^F	3.4 ^F	3.6	3.7	3.4	3.4	3.2	B	3.3	3.4	3.4	3.5	3.4	3.3	J	C	C	C	C
11	C	C	(3.5)	(3.0) ^F	(3.2) ^F	(3.2) ^F	(3.0) ^F	(3.1) ^F	C	T	J	C	J	(2.9) ^F	J	(2.9) ^F	J	J	C	C	C	C	C	C
12	F	(3.1) ^F	(2.9) ^F	(2.9) ^F	(3.2) ^F	(3.1) ^F	(3.1) ^F	J	3.5	(3.5) ^F	3.2	3.0 ^F	2.9 ^F	2.9 ^F	3.1 ^F	2.9 ^F	3.0 ^F	(3.3) ^F	(3.2) ^F	3.3 ^F	3.2 ^F	F	(3.2) ^F	F
13	F	(2.9) ^F	(2.9) ^F	(2.9) ^F	(3.1) ^F	(3.0) ^F	(3.1) ^F	(3.2)	3.3	(3.4)	3.1	3.4	(3.4)	3.6	3.3	3.4	3.4	3.2	3.4	3.3	(3.1)	(3.2) ^F	(3.1) ^F	(3.1) ^F
14	(3.0) ^F	3.2 ^F	3.3 ^F	3.2 ^F	3.2 ^F	3.3	(3.2)	3.4 ^F	3.6 ^F	(3.1)	3.3	3.3	3.3	3.3	3.4	3.3	3.2	3.4	3.2	3.4	(3.1)	(3.2) ^F	(2.7) ^F	(2.7) ^F
15	(2.9) ^F	(3.1) ^F	F	(2.9) ^F	(2.7) ^F	(2.7) ^F	(3.0) ^F	3.3 ^F	3.0 ^F	3.1 ^F	3.1 ^F	2.6 ^F	2.9 ^F	3.0 ^F	3.3 ^F	3.0 ^F	3.2 ^F	3.2 ^F	3.1 ^F	3.1 ^F	3.0 ^F	2.9 ^F	3.1	3.1
16	3.1 ^F	(3.1) ^F	(3.1) ^F	(3.2) ^F	2.8 ^F	(3.2) ^F	(3.2) ^F	3.4	3.2	3.3	3.2	3.2	3.1	3.2	3.4	3.3	3.2	3.4	3.3	3.3	3.2 ^F	(3.1) ^F	3.1 ^F	(3.0) ^F
17	(3.2) ^F	(3.3) ^F	3.3 ^F	3.2	3.2	B	(3.1)	3.5	3.3	3.7	3.3	3.2	3.4	3.4	3.2	3.5	3.2	3.4	3.4	3.2	3.1	3.1	3.1	J
18	3.2 ^F	(3.2) ^F	(3.2) ^F	(2.3) ^F	3.3 ^F	(3.2) ^F	3.3	3.5	3.4	3.6	3.2	3.2	(3.4)	3.3	3.2	3.3	3.3	3.4	3.3	3.3	3.1	3.2	3.3	3.2
19	(3.2) ^F	(3.0) ^F	(3.0) ^F	(3.0) ^F	(3.2) ^F	(2.1) ^F	3.1	3.5	3.5	3.5	3.5	3.4	3.2	3.5	3.2	3.4	3.2	3.3	3.4	3.4	3.3	3.2	3.3	3.0
20	3.2	3.2	3.2	3.2	3.3	3.1	3.4	3.5	3.6	3.5	3.6	(3.2)	3.2	3.2	3.2	3.2	2.9	3.2	3.3	3.2	3.3	3.2	3.2	3.2
21	(3.1) ^F	3.0 ^F	(3.2) ^F	(3.2) ^F	(3.2) ^F	(3.1) ^F	3.2 ^F	3.5	3.4	3.3	3.3	3.4	3.3	3.4	3.2	3.3	3.5	3.3	3.4	3.4	3.3	(3.1)	3.1	3.1
22	3.1 ^F	(3.2) ^F	3.3 ^F	3.3 ^F	(3.2) ^F	(3.0) ^F	3.3	3.4	3.5	3.2	3.4	3.3	3.4	3.3	3.3	3.4	3.4	3.3	3.2	3.3	3.3	3.1	3.2	3.2 ^F
23	3.2 ^F	3.2 ^F	(3.2) ^F	3.2 ^F	(3.1) ^F	3.1 ^F	3.3 ^F	3.4	3.5	3.3	3.2	3.3	3.2	3.3	3.3	3.4	3.3	3.4	3.4	3.2	3.2	3.3 ^F	(3.3) ^F	(3.2) ^F
24	(3.2) ^F	3.3 ^F	(3.0) ^F	(3.3) ^F	(3.2) ^F	(3.2) ^F	(3.4) ^F	3.3	3.5	3.4	3.3	3.2	3.2	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.0	(3.0) ^F	(3.1) ^F	(3.1) ^F
25	(3.1) ^F	(3.1) ^F	(3.0) ^F	(3.2) ^F	(3.2) ^F	(3.2) ^F	(3.5) ^F	3.7	3.6	3.3	3.3	3.3	(3.5)	3.3	3.2	3.3	3.3	3.2	3.2	3.3	2.9	2.8	3.0 ^F	3.1 ^F
26	3.1 ^F	3.0 ^F	3.1 ^F	2.8 ^F	F	F	(3.0) ^F	3.4	3	(3.0) ^F	2.6 ^F	C	(2.4) ^F	3.0 ^F	3.1 ^F	2.8 ^F	3.2 ^F	3.0 ^F	3.3 ^F	2.9 ^F	3.1 ^F	3.1 ^F	(3.2) ^F	(3.0) ^F
27	(2.9) ^F	(2.8) ^F	(2.8) ^F	(3.1) ^F	(2.9) ^F	(2.9) ^F	3.2 ^F	3.4	(3.1) ^F	(3.1) ^F	2.6 ^F	(2.8) ^F	(3.0) ^F	3.1 ^F	3.0 ^F	3.2 ^F	3.2 ^F	3.1 ^F	3.2 ^F	3.2 ^F	3.2 ^F	3.2 ^F	3.1 ^F	2.8 ^F
28	2.9 ^F	2.8 ^F	2.8 ^F	2.8 ^F	2.9 ^F	(3.0) ^F	(3.2) ^F	3.6	(3.6)	3.2	3.2	3.2	3.1	3.2	3.2	3.3	3.1	3.2	3.3	3.2	3.2	3.1	(3.2) ^F	(3.0) ^F
29	(2.7) ^F	(2.9) ^F	(2.9) ^F	(3.2) ^F	(3.0) ^F	(3.0) ^F	(3.3) ^F	3.6	(3.6)	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.4	3.5	3.5	3.5	3.2	(3.3) ^F	(3.1) ^F
30	(3.1) ^F	(3.0) ^F	(3.1) ^F	(3.2) ^F	(3.2) ^F	(3.2) ^F	3.5	(3.6)	3.6	(3.6)	3.6	(2.9)	3.2	3.3	3.3	3.3	3.2	3.4	3.5	3.5	3.5	3.2	(3.3) ^F	(3.4) ^F
31	(3.3) ^F	(3.1) ^F	(3.3) ^F	(3.0) ^F	(3.3) ^F	(3.3) ^F	(3.6) ^F	3.6	3.5	3.6	(3.5)	(2.3)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.1	3.1	3.1	3.2
Mean	3.1	3.1	3.1	3.2	3.2	3.1	3.2	3.4	3.5	3.4	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.2	3.2	3.2	3.1

TABLE 57

IONOSPHERE DATA - 13

Washington, D.C. Ionosphere Station

National Bureau of Standards

Hourly values of E-M1500 for March 1945

Records measured by: M.A.R. A.F.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									A	3.7	A	A	(3.9)	B	(3.8)	3.8	3.7							
2									(3.6)	3.5	3.7	3.8	(3.7)	B	B	3.6	3.6	3.9						
3									(3.5)	3.8	3.8	3.6	B	B	3.8	(3.8)	3.9	3.5						
4									(3.5)	3.6	3.8	(3.8)	A	4.0	3.7	3.8	3.9	3.6						
5									3.8	3.8	3.8	3.9	3.9	3.6	(3.8)	3.9	3.7	(3.8)						
6									F	(3.8)	(4.0)	B	3.8	(4.0)	3.7	3.6	3.8	3.7	B					
7									(3.7)F	3.8	3.8	3.8	3.9	A	(3.8)	3.8	C	3.6	3.6					
8									(3.8)	A	3.9	A	(3.7)	A	3.8	(3.8)	3.8	3.7	A					
9									A	A	A	B	3.8	(3.8)	3.9	3.7	A	A	A					
10									(3.5)	(3.7)	(3.8)	(3.7)	B	B	C	(3.9)	A	A	C					
11									K	A	K	A	K	3.8	3.8	A	(3.9)	3.8	A					
12									K	A	K	A	K	(4.0)	3.8	3.8	3.8	3.8	(3.8)					
13									A	A	A	(4.1)	(3.8)	(3.8)	(4.0)	3.6	3.8	3.8	A					
14									3.5	3.7	A	A	(3.9)	A	(4.0)	3.8	4.0	(3.7)						
15									K	(4.0)	(3.7)	A	K	(4.0)	3.7	3.7	(3.8)	3.8	3.5					
16									A	(3.6)	(3.9)	3.8	4.0	(3.8)	(3.8)	3.9	3.9	3.8	(3.5)					
17									(3.8)	3.7	3.9	(3.7)	3.8	3.9	(3.9)	3.8	3.9	(3.7)						
18									(3.6)	(3.9)	(4.0)	(3.9)	(3.9)	3.8	3.8	(3.6)	3.7	A	(3.8)					
19									(3.8)	(4.0)	(3.8)	C	B	(3.8)	3.7	(3.6)	3.8	3.7	(3.9)					
20									(3.5)	3.7	3.9	3.8	(3.9)	(3.9)	(3.8)	3.8	3.9	A						
21									A	(4.0)	A	A	(3.8)	3.7	4.0	3.8	(3.8)	3.8	A					
22									A	A	(3.8)	3.9	3.9	A	3.8	3.9	3.8	A						
23									(3.5)	(3.9)	(3.9)	(4.0)	(4.0)	(3.8)	(3.8)	3.7	3.8	(3.7)						
24									A	A	A	B	A	(4.0)	3.8	3.8	3.9	A						
25									(3.8)	A	A	(3.8)	A	(3.9)	A	(3.8)	3.8	3.9	(3.6)					
26									K	(3.9)	3.7	(3.8)	(3.7)	3.8	(3.9)	3.8	3.8	3.9	3.7	(3.4)				
27									K	3.9	4.0	(3.7)	(3.8)	4.0	3.9	3.9	3.9	(3.9)	A					
28									(3.5)	3.7	3.6	3.7	A	3.9	4.1	4.0	4.0	4.1	3.8	(4.0)				
29									(3.9)	3.6	A	(4.0)	(4.1)	(3.8)	(4.0)	4.1	3.9	3.8	3.8					
30									A	A	A	(4.2)	(4.2)	4.1	4.1	4.0	4.0	A	3.7					
31									A	(4.2)	A	4.1	(4.2)	4.1	4.2	3.9	4.1	3.8	3.8					
Sum									3.7	3.8	3.8	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.7					
Median																								

RESTRICTED

Table 58

Ionospheric Storminess, March, 1945

Day	Ionospheric Character*		Principal Storms		Magnetic Character**	
	00-12 GCT	12-24 GCT	Beginning GCT	End GCT	00-12 GCT	12-24 GCT
March						
1	1	1			2	1
2	3	1			1	2
3	1	2			3	1
4	2	2			1	1
5	2	1			1	4
6	1	0			2	3
7	2	1			2	2
8	1	2			3	2
9	2	3			1	1
10	2	1			1	1
11	2	5	0800	—	4	3
12	4	4	—	1100	3	5
13	4	2	—	—	3	1
14	1	2	—	—	2	2
15	4	4	0100	—	4	4
16	2	2	—	0200	3	3
17	1	2			2	1
18	1	1			2	2
19	2	2			1	1
20	1	2			2	3
21	3	1			2	2
22	1	1			1	0
23	1	2			1	1
24	1	2			2	2
25	0	2			1	3
26	4	6	0300	—	4	4
27	4	4	—	—	3	3
28	4	6	—	—	5	3
29	5	3	—	1100	3	2
30	2	1	—	—	1	1
31	1	2			0	1

*Ionosphere character figure (1-figure) for ionospheric storminess at Washington, D.C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

**Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

†Dashes indicate continuance of disturbance.

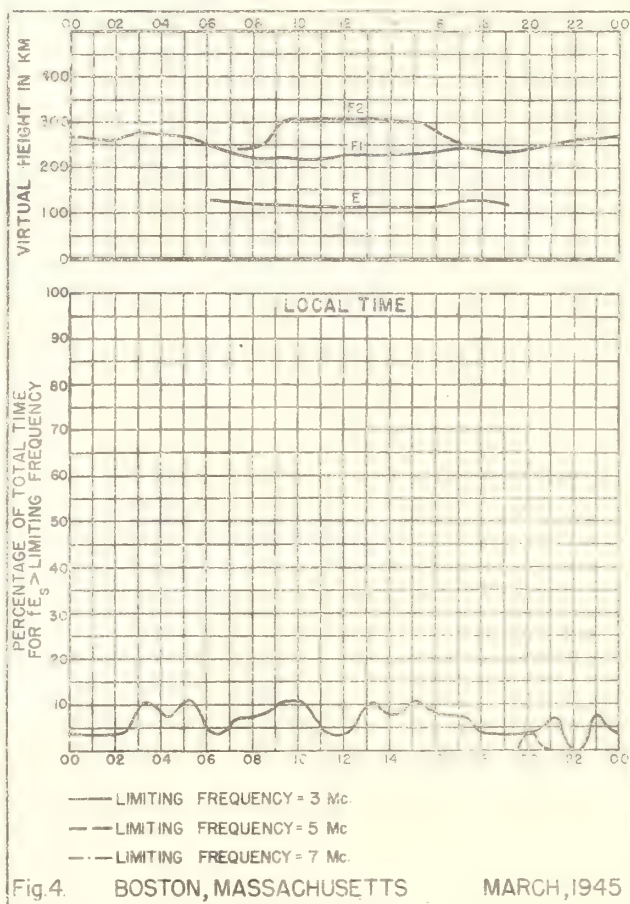
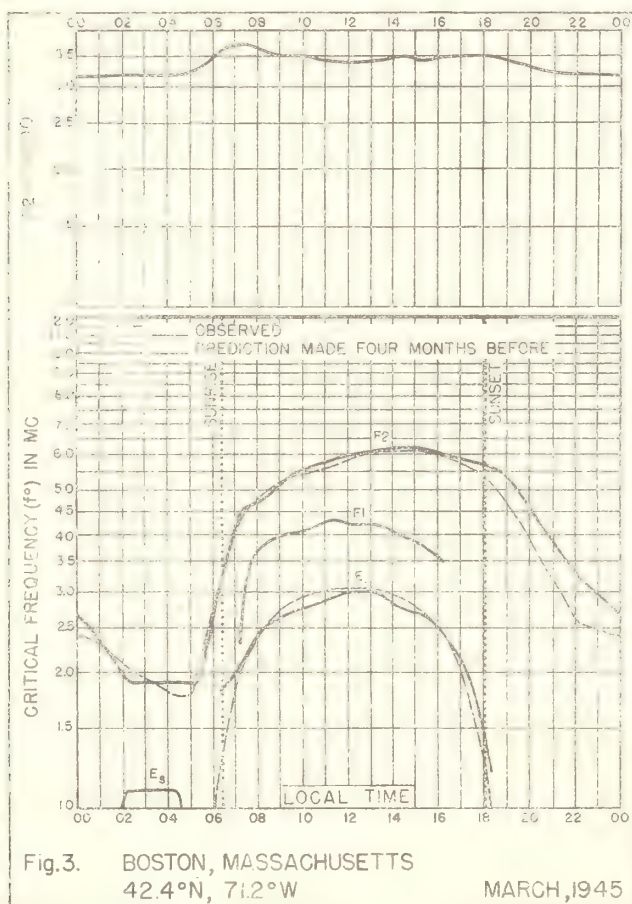
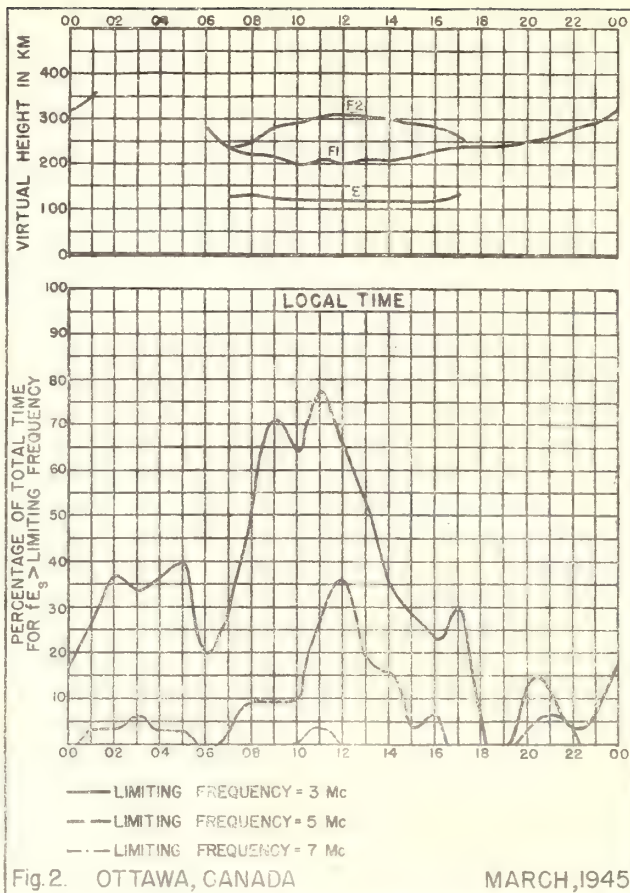
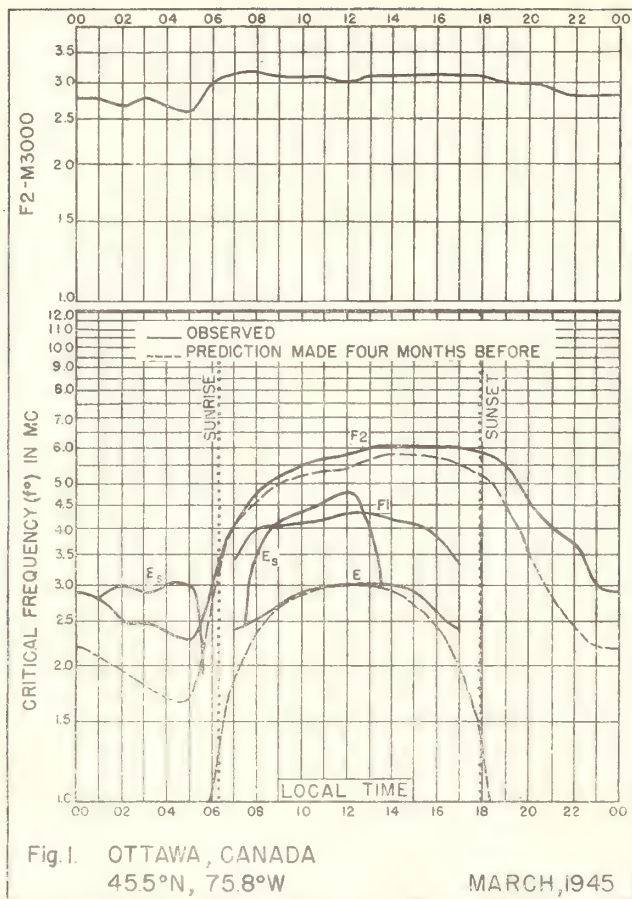
Table 59. Sudden Ionosphere Disturbances

Observed at Washington, D.C.

Day	GCT		Locations of transmitters	Relative intensity at minimum*	Other phenomena
	Beginning	End			
Mar. 10	1641	1800	Ohio, D.C., England, Mexico, Brazil, Chile	0.01	
21	1507	1530	Ohio, D.C., England, Mexico, Brazil, Chile	0.1	
29	1712	1730	Ohio, D.C., England, Mexico, Brazil, Chile, Hawaii	0.1	Terr.mag.pulse** 1712-1724

*Ratio of received field intensity during fadeout to average field intensity before and after, for station W8XAL, 6080 kilocycles, 600 kilometers distant.

**As observed on Cheltenham magnetogram of the United States Coast and Geodetic Survey.



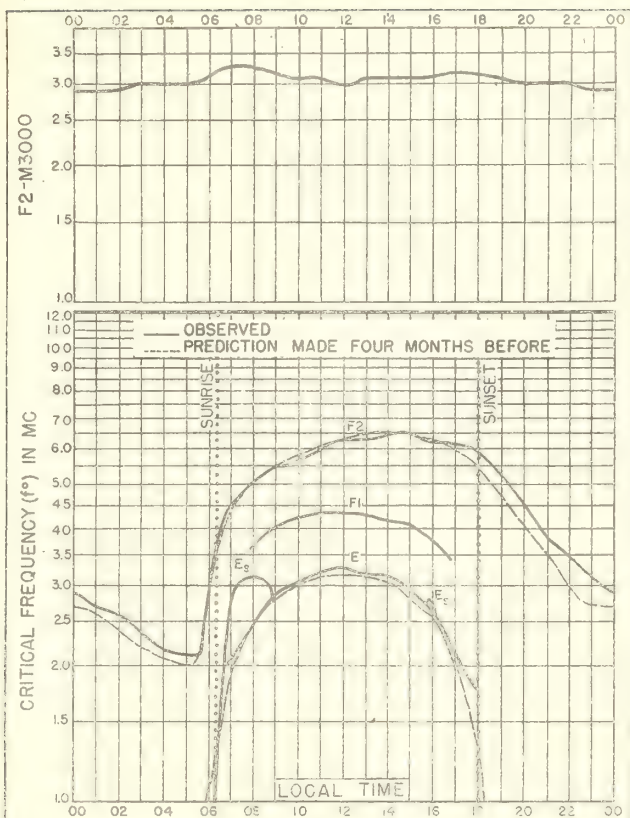


Fig.5. WASHINGTON, D.C.
39.0°N, 77.5°W

MARCH, 1945

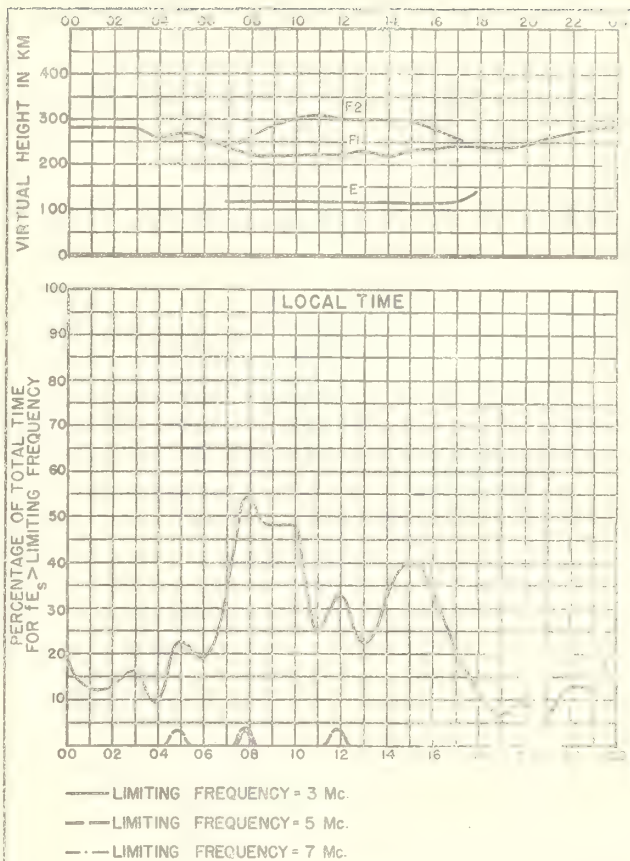


Fig.6. WASHINGTON, D.C.

MARCH, 1945

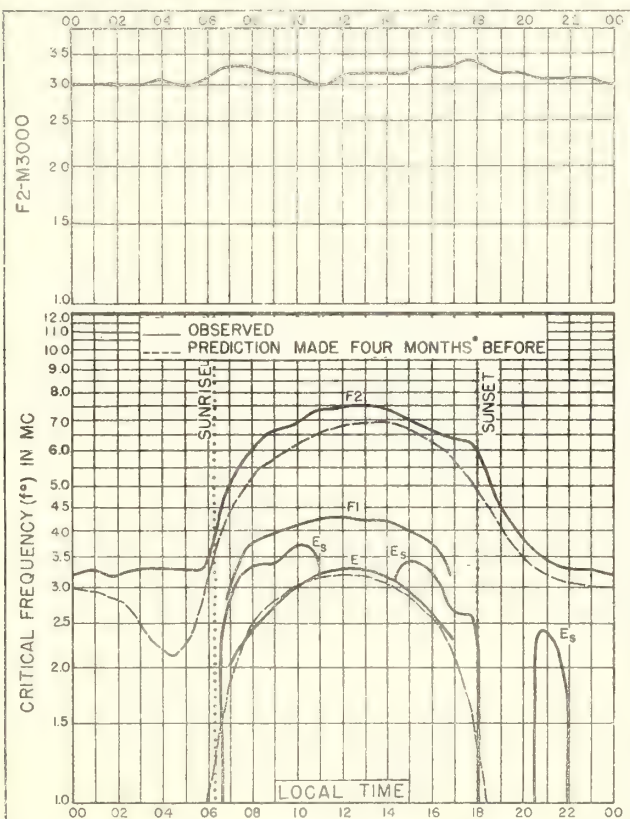


Fig.7. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W

MARCH, 1945

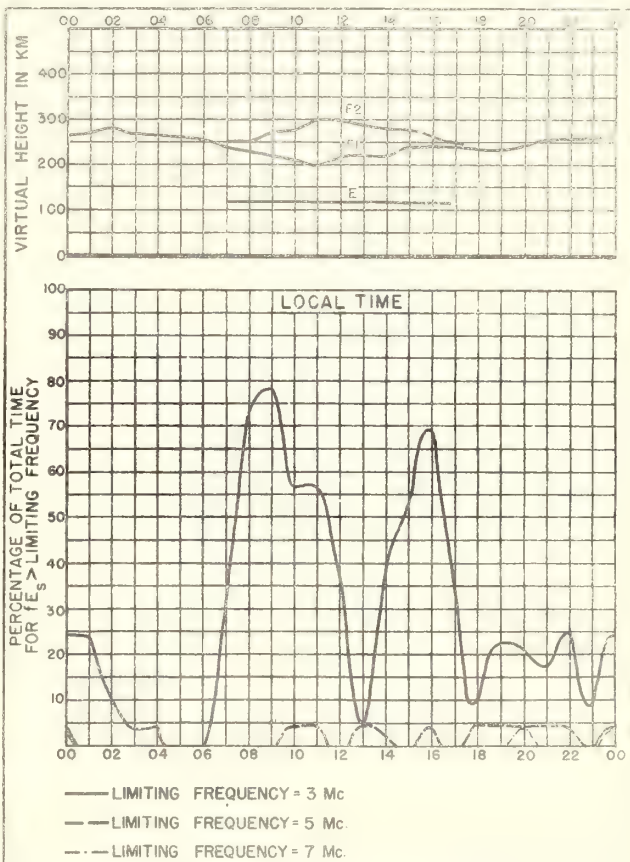


Fig.8. SAN FRANCISCO, CALIF.

MARCH, 1945

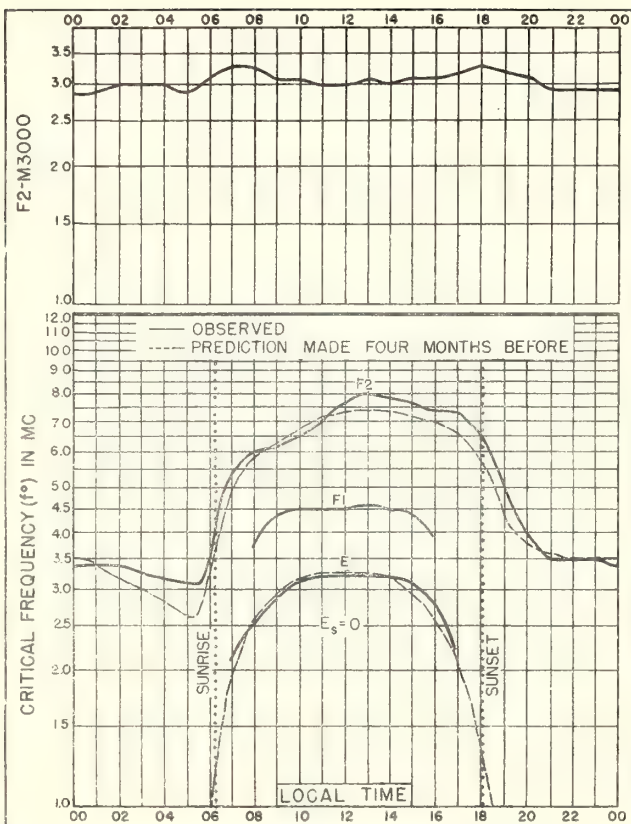


Fig. 9. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W

MARCH, 1945

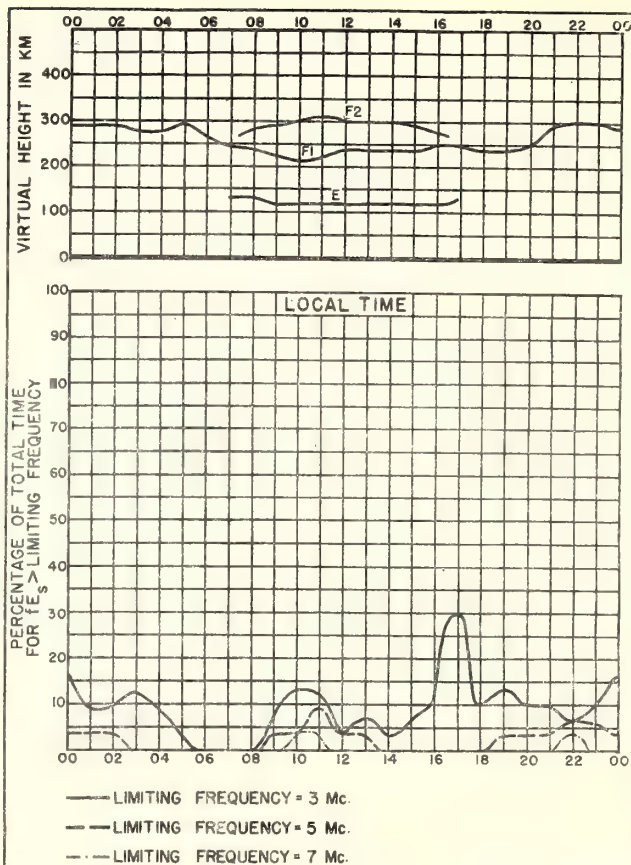


Fig. 10. BATON ROUGE, LOUISIANA

MARCH, 1945

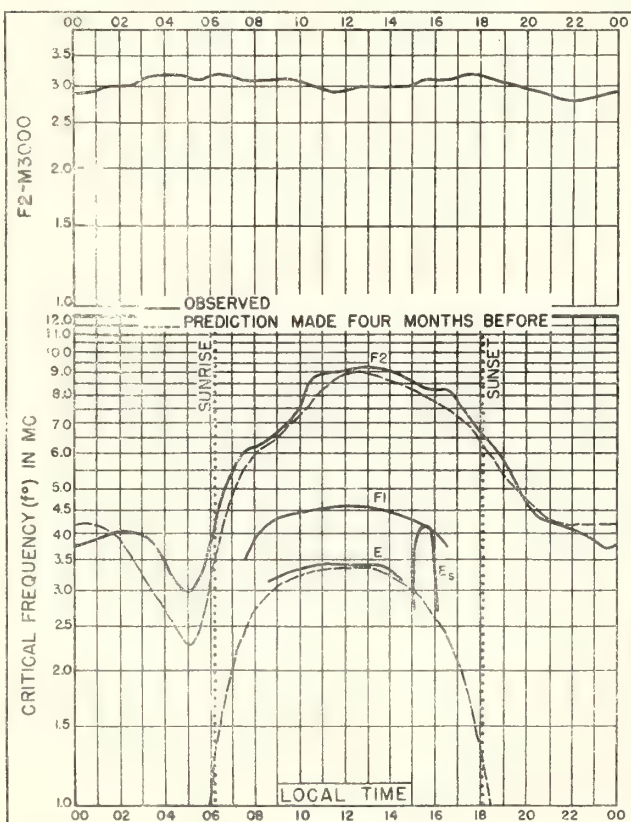


Fig. 11. SAN JUAN, PUERTO RICO
18.4°N, 66.1°W

MARCH, 1945

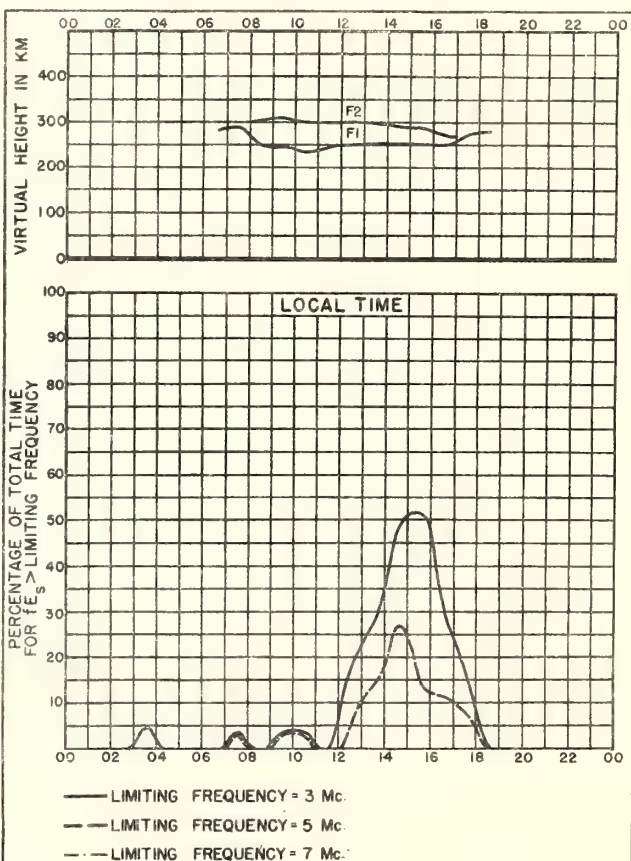
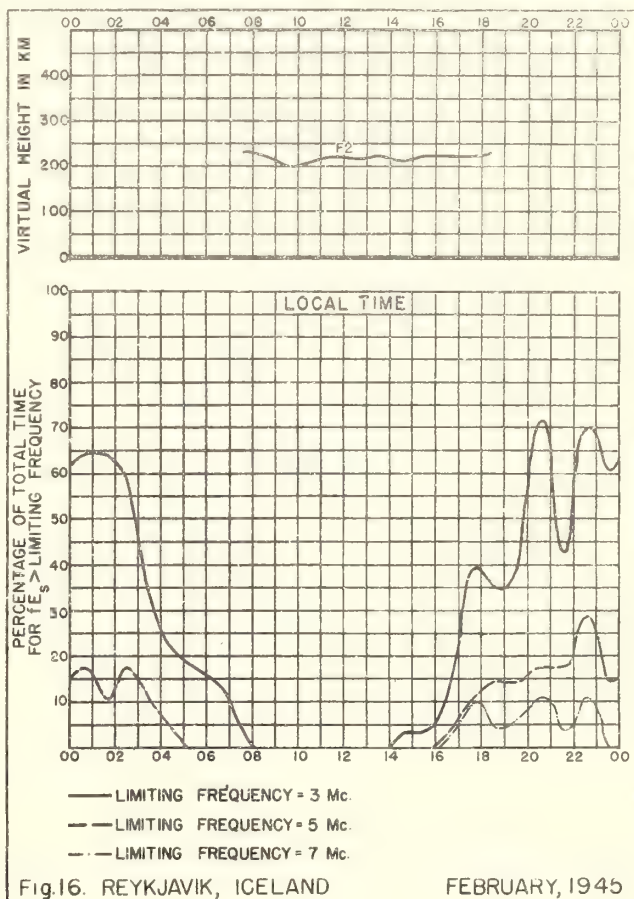
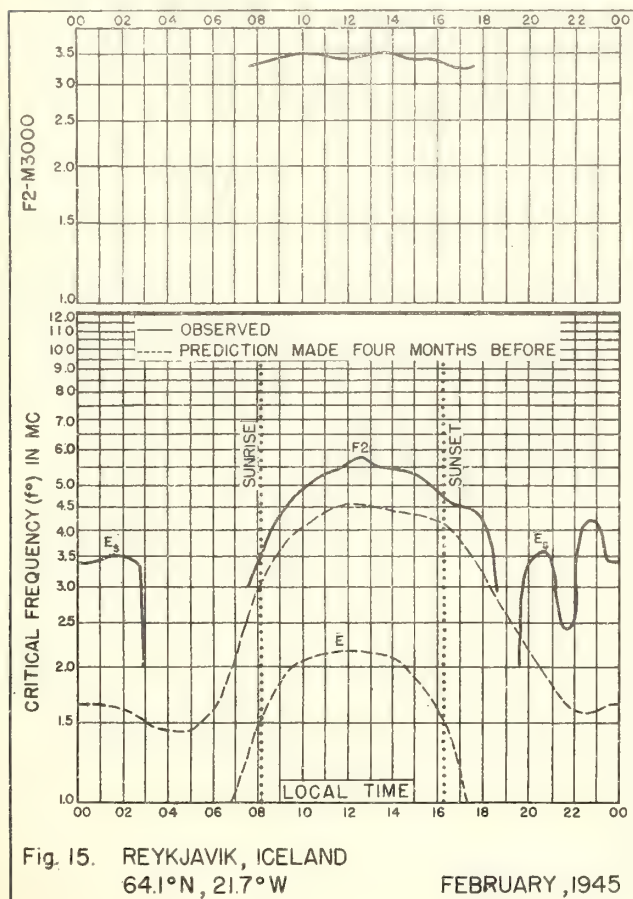
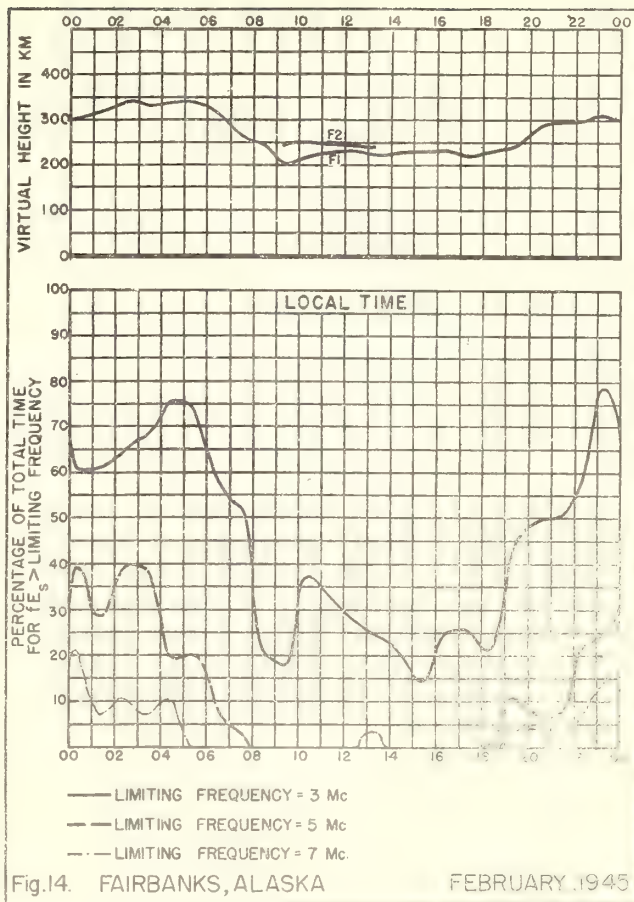
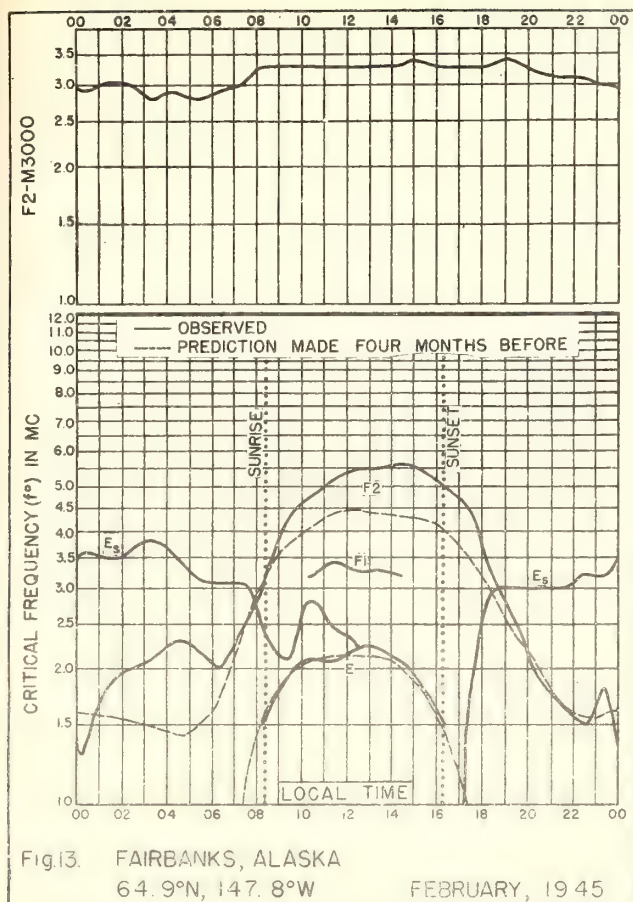


Fig. 12. SAN JUAN, PUERTO RICO

MARCH, 1945



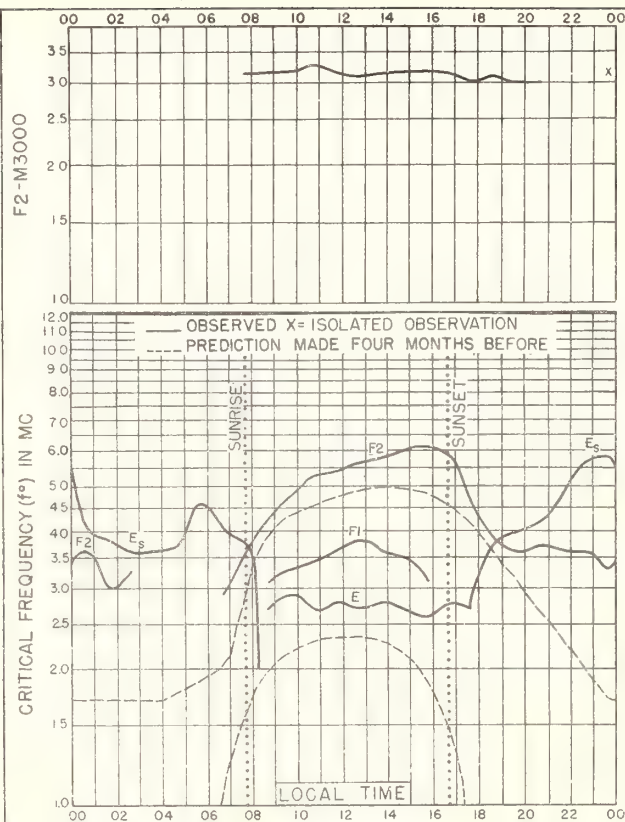


Fig 17 CHURCHILL, CANADA
58.8°N, 94.2°W
FEBRUARY, 1945

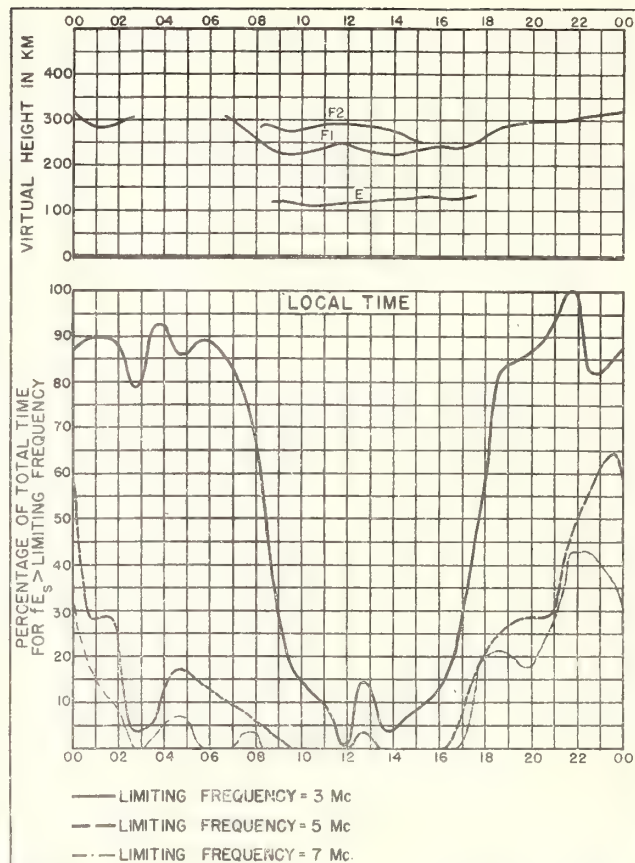


Fig 18. CHURCHILL, CANADA
FEBRUARY, 1945

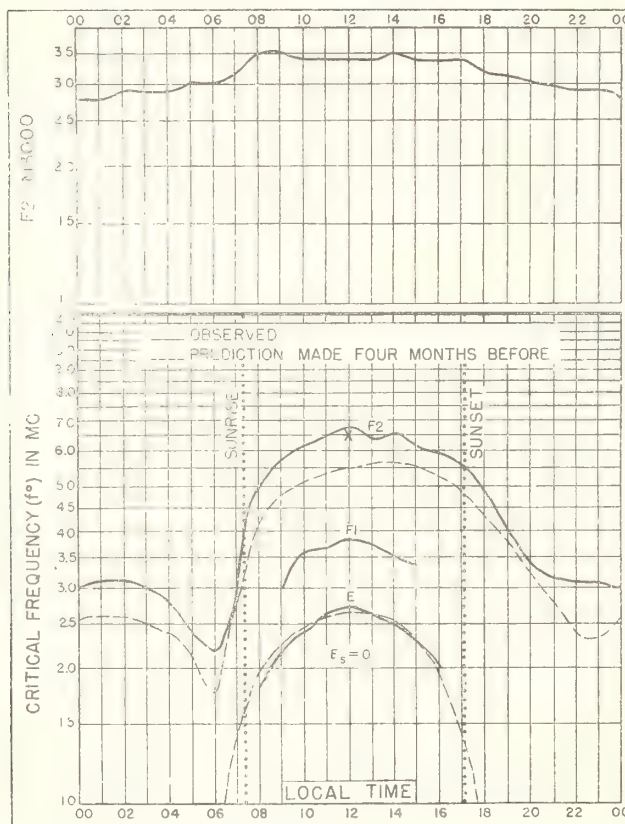


Fig 19 GREAT BADDOW, ENGLAND
51.7°N, 0.5°E
X= SLOUGH, ENGLAND (NOON VALUE $F_2=6.5$)
51.5°N, 0.6°W
FEBRUARY, 1945

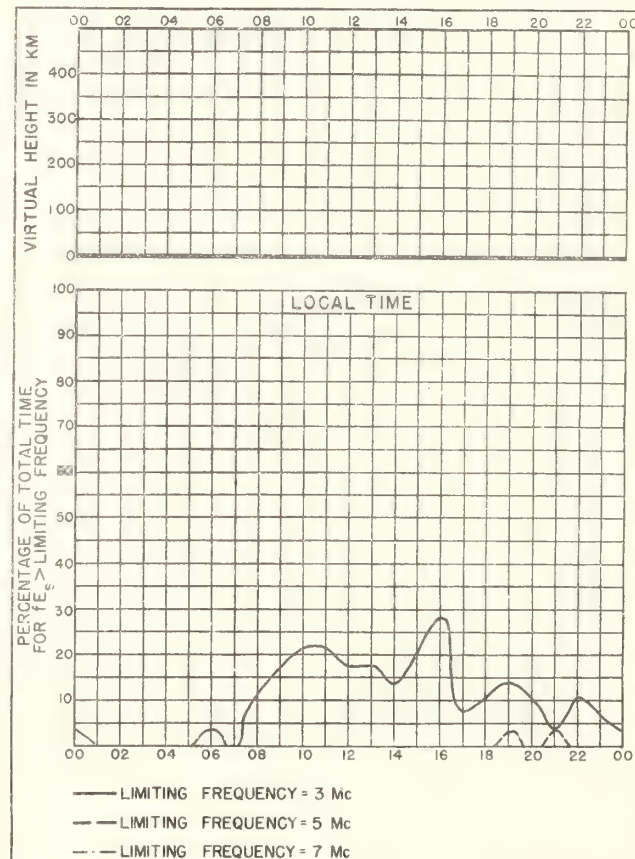


Fig 20. GREAT BADDOW, ENGLAND
FEBRUARY, 1945

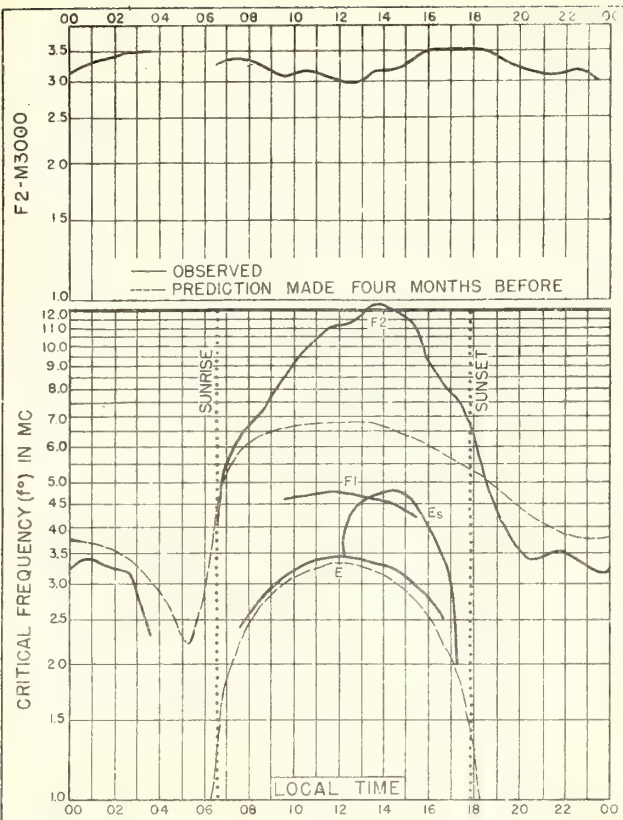


Fig.21. MAUI, HAWAII
 20.8°N, 156.5°W
 FEBRUARY, 1945

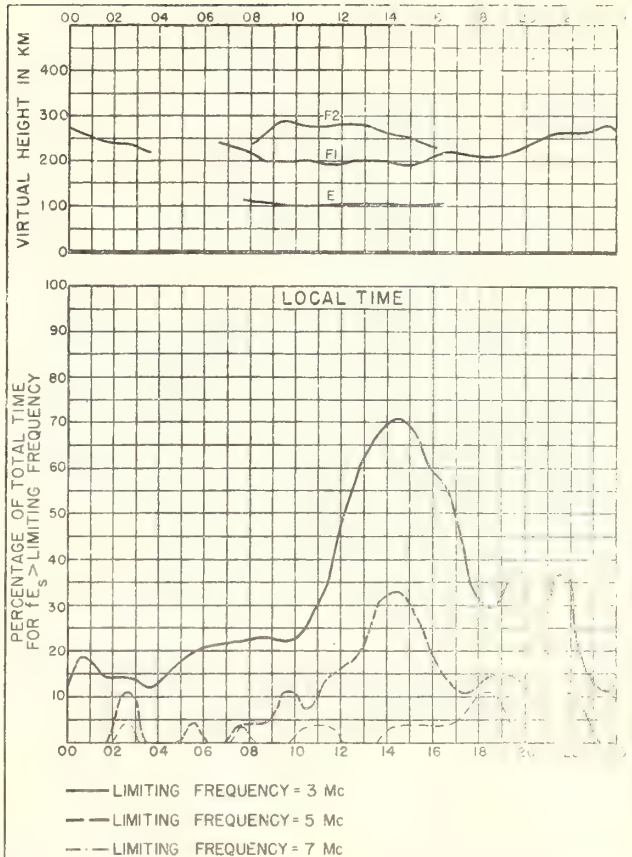


Fig.22. MAUI, HAWAII
 FEBRUARY, 1945

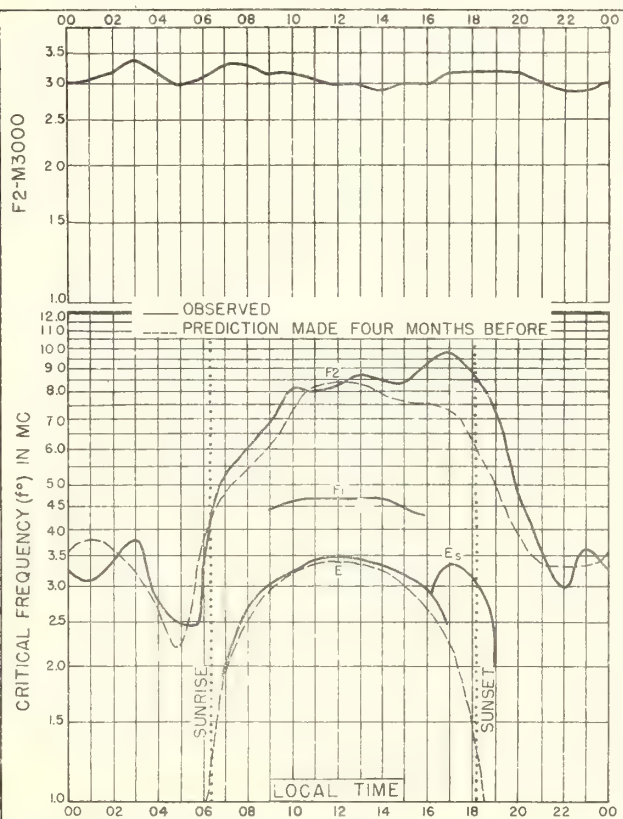


Fig. 23. TRINIDAD, BRIT. WEST INDIES
 10.6°N, 61.3°W
 FEBRUARY, 1945

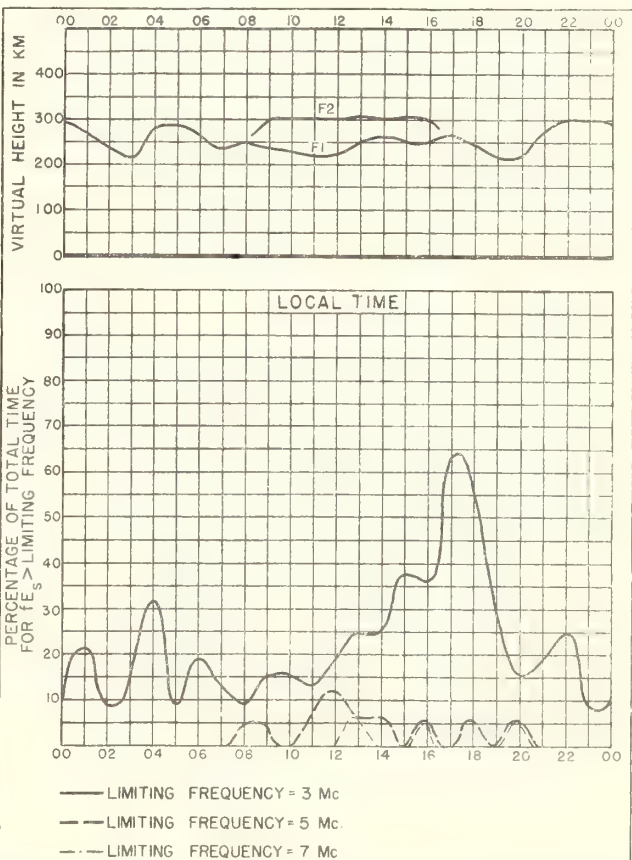
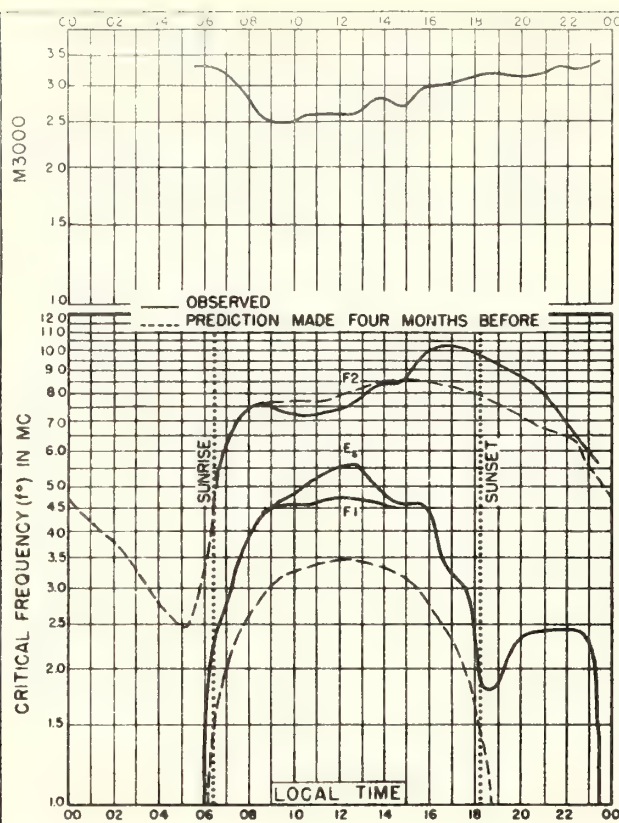
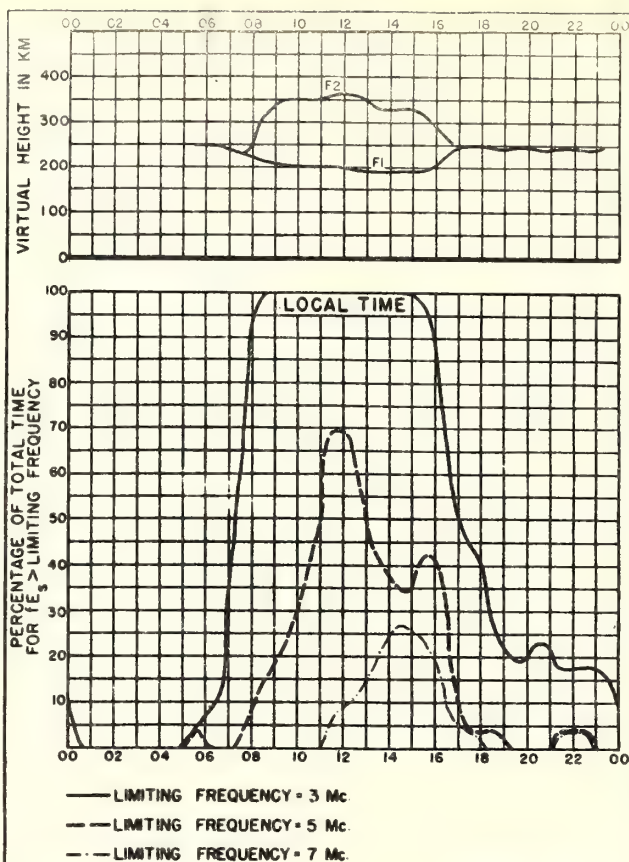


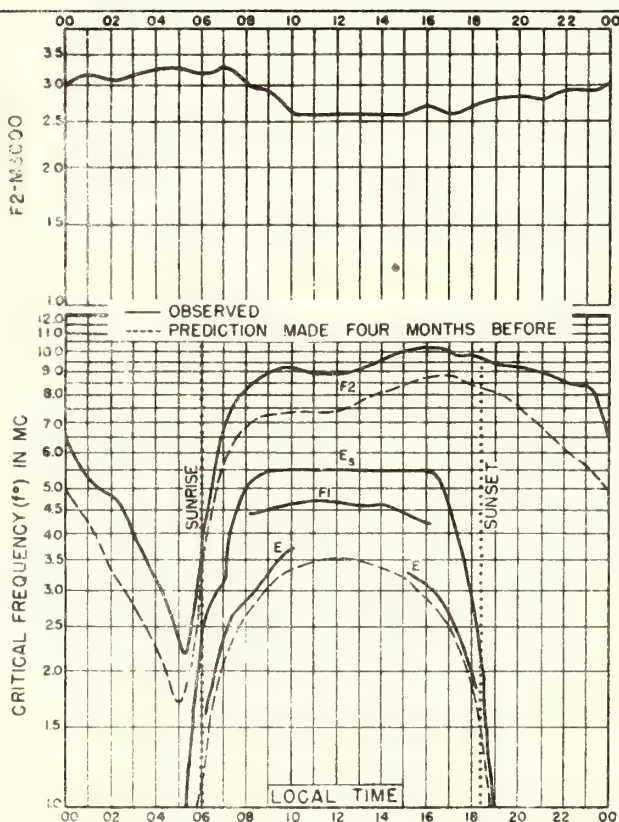
Fig.24. TRINIDAD, BRIT. WEST INDIES
 FEBRUARY, 1945



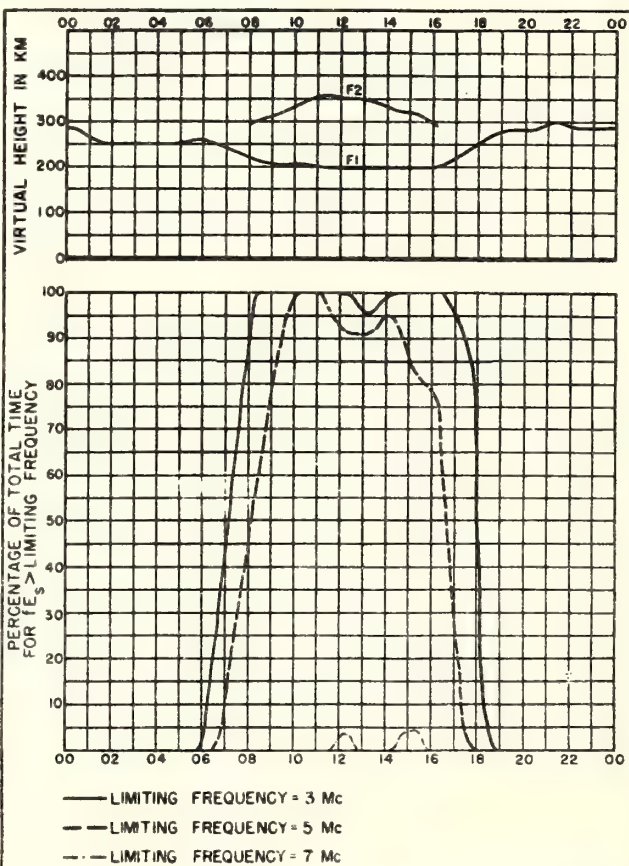
FEBRUARY, 1945



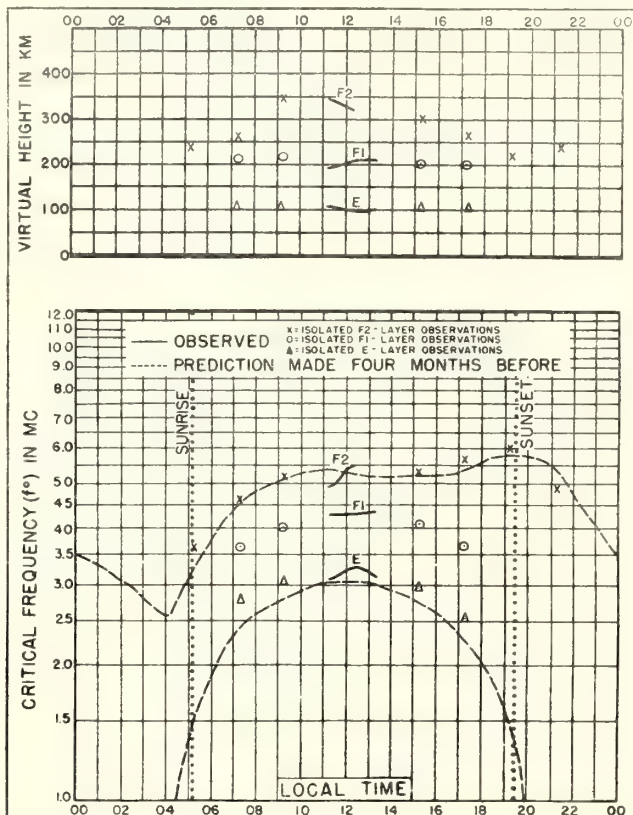
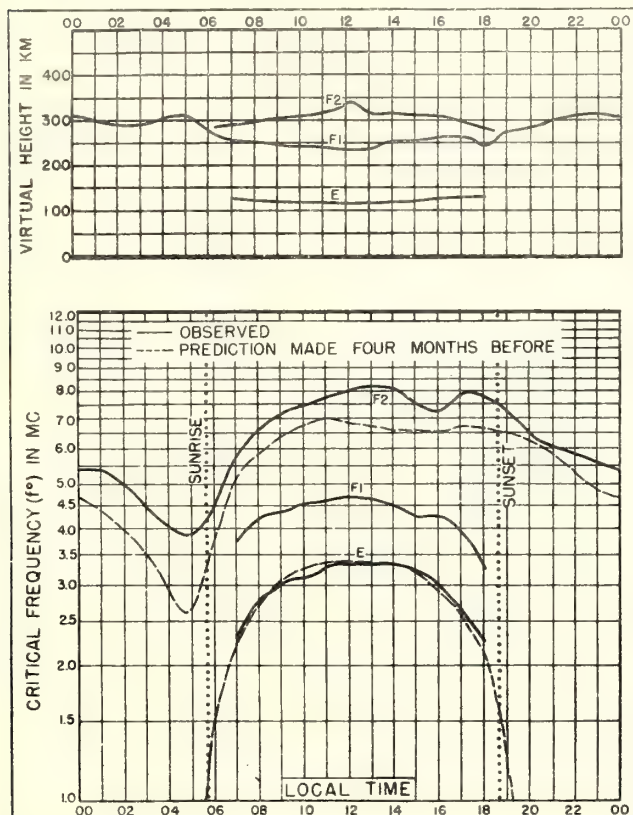
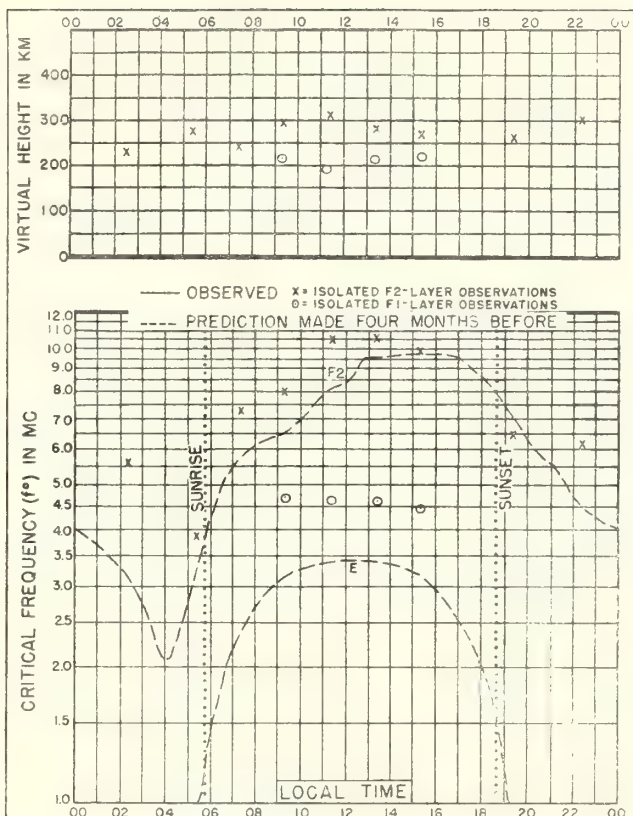
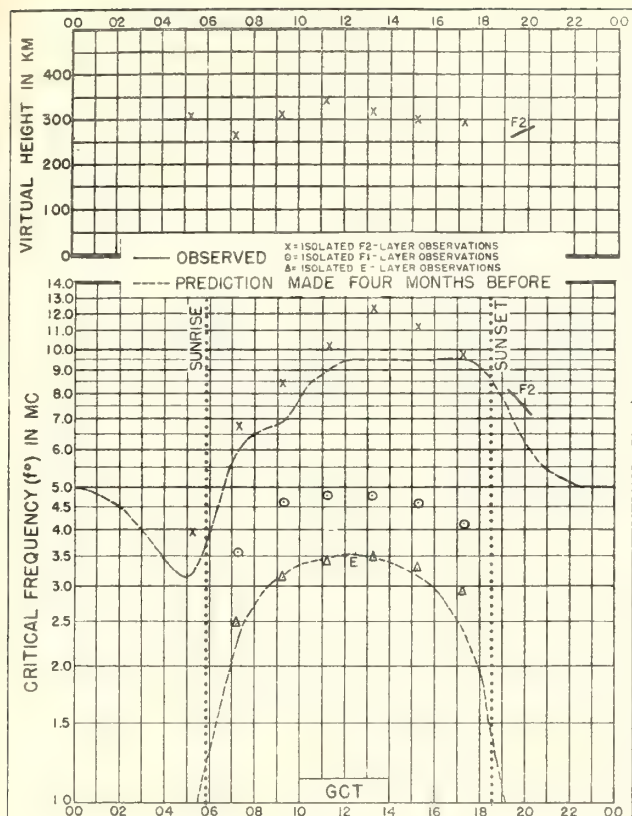
FEBRUARY, 1945



FEBRUARY, 1945



FEBRUARY, 1945



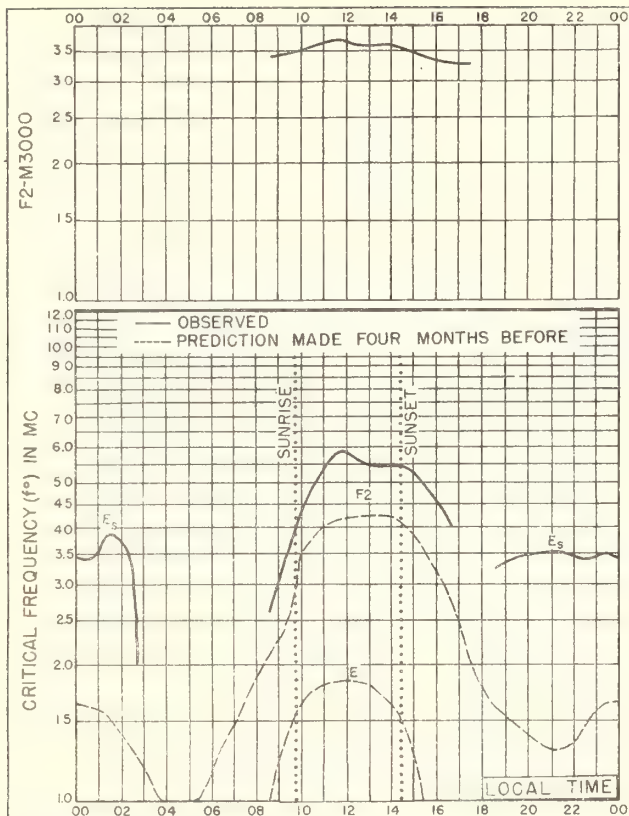


Fig.33. REYKJAVIK, ICELAND
64.1°N, 21.7°W

JANUARY, 1945

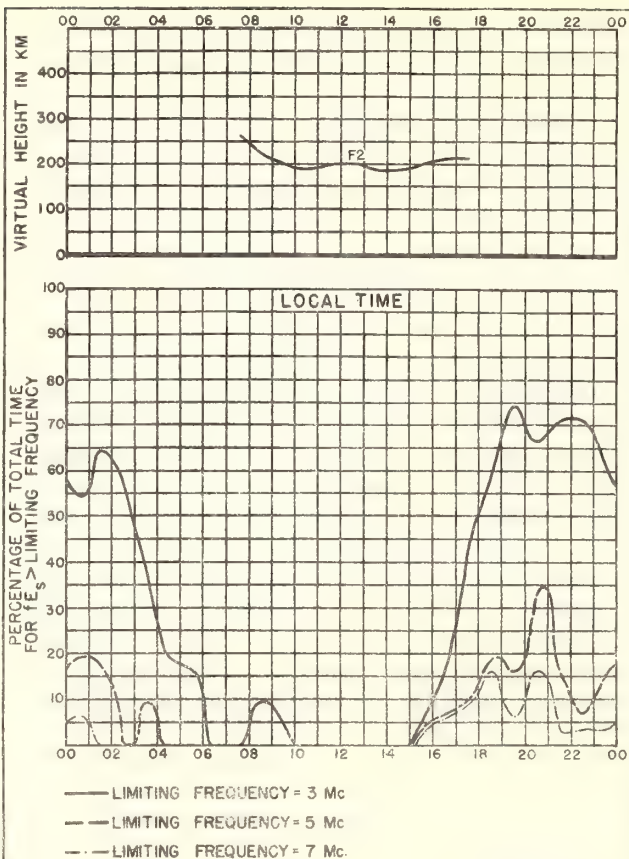


Fig.34. REYKJAVIK, ICELAND

JANUARY, 1945

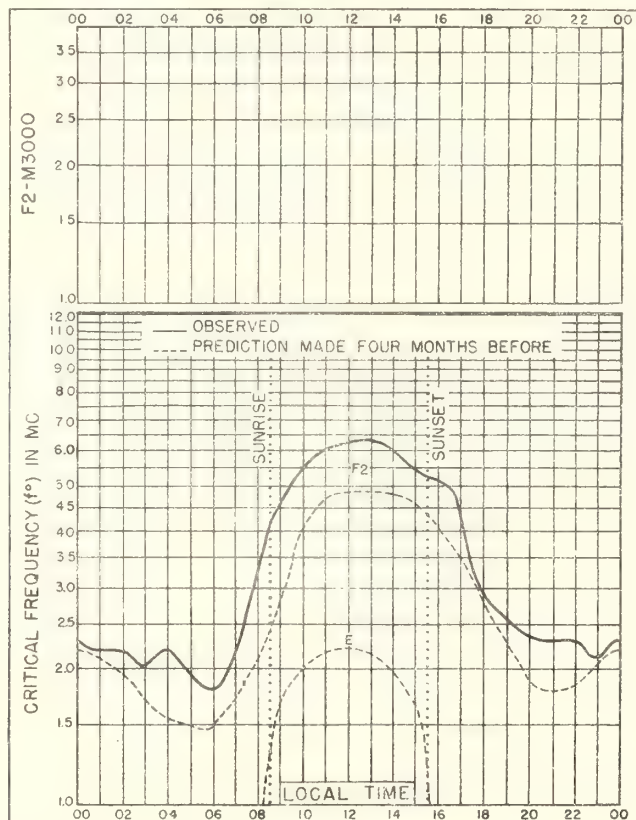
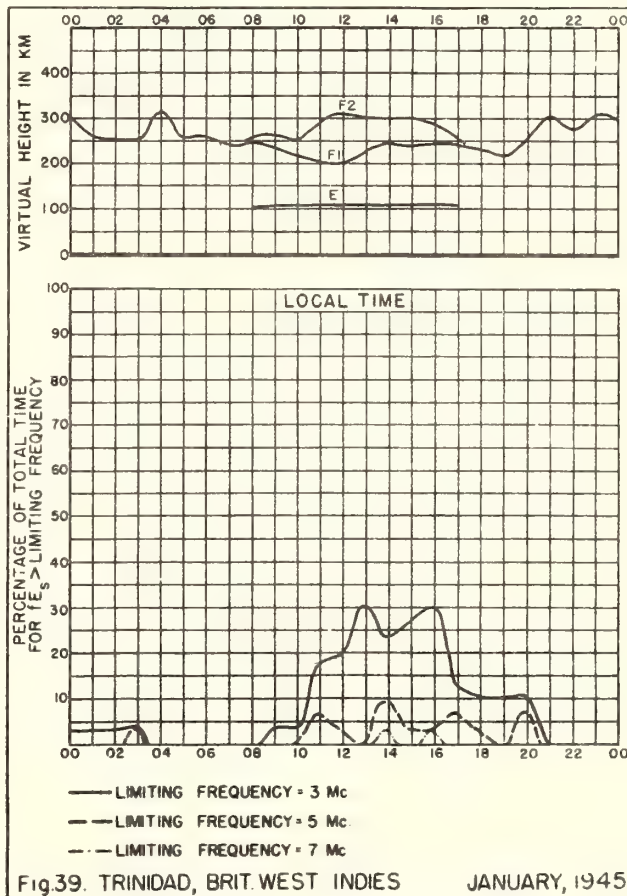
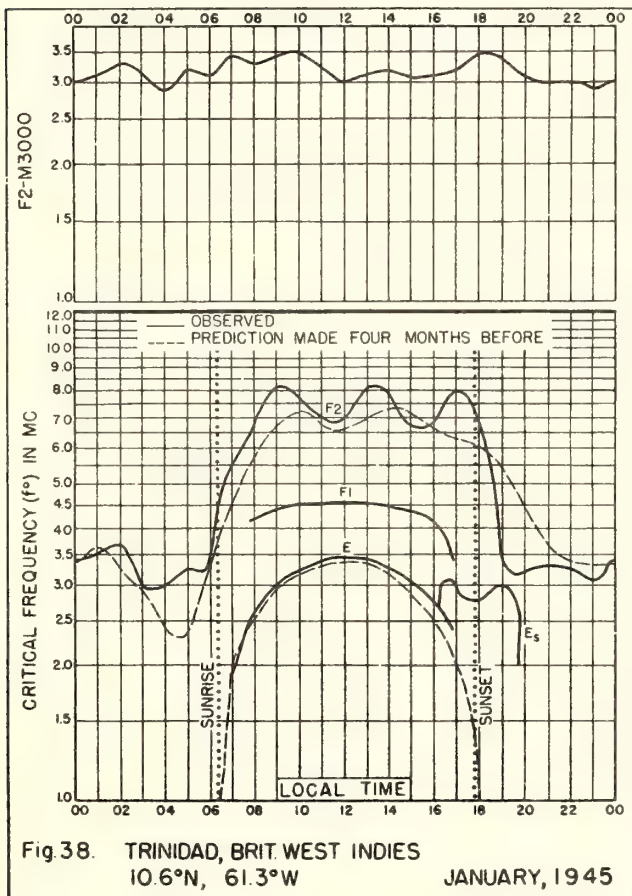
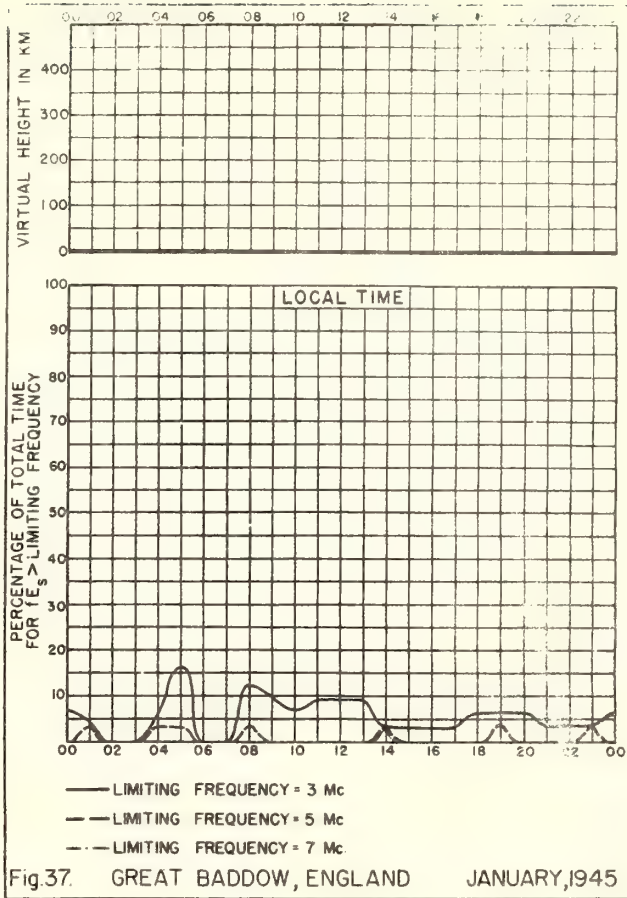
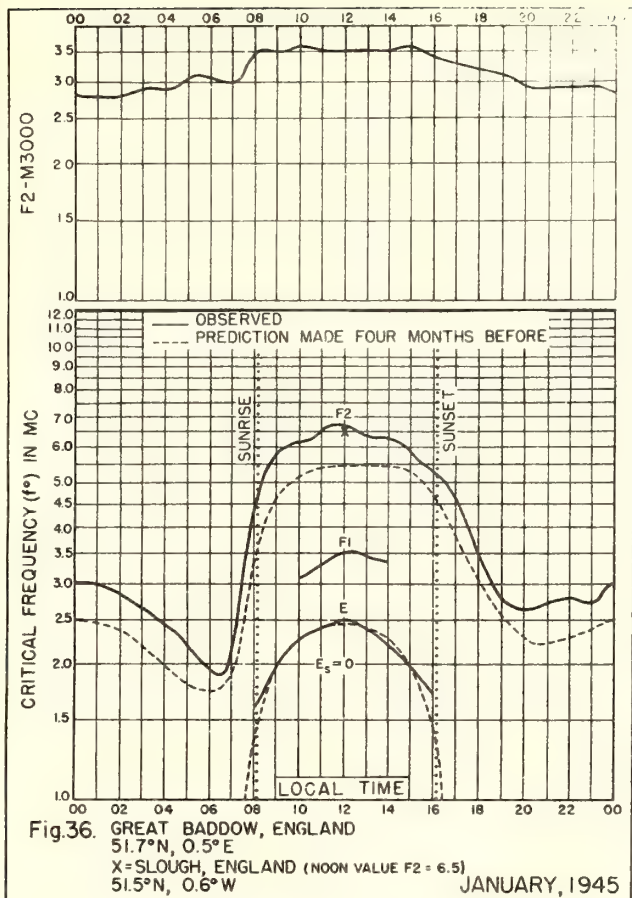
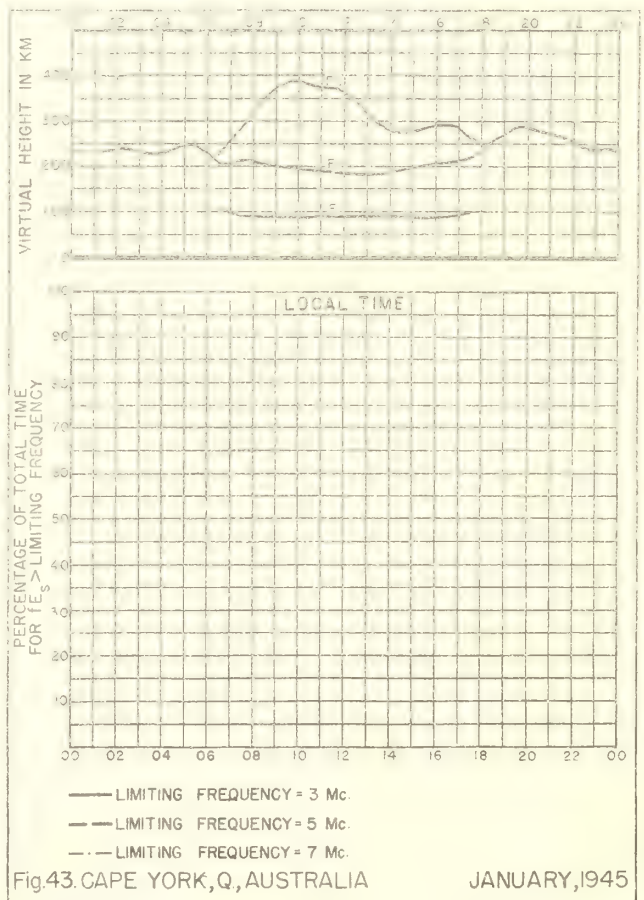
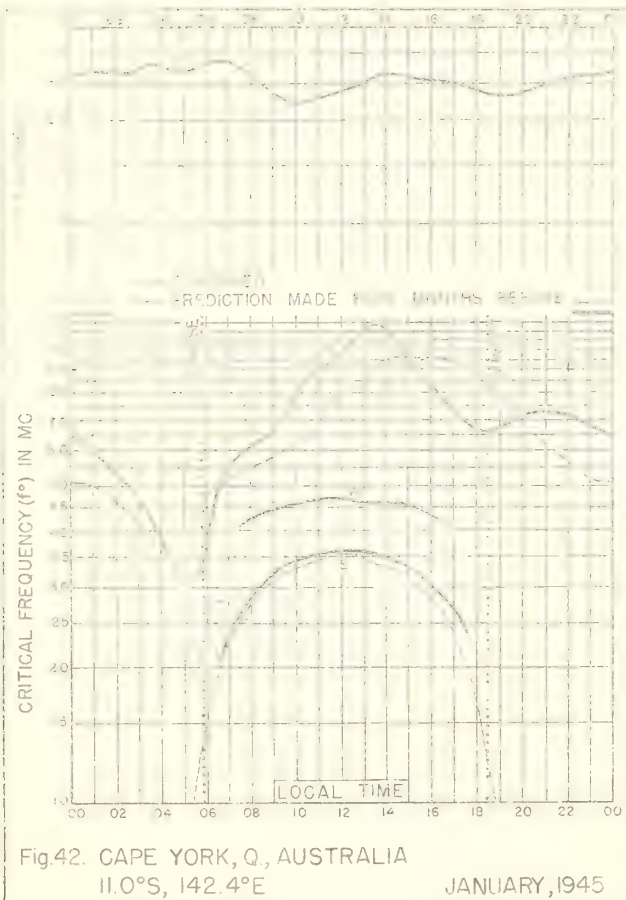
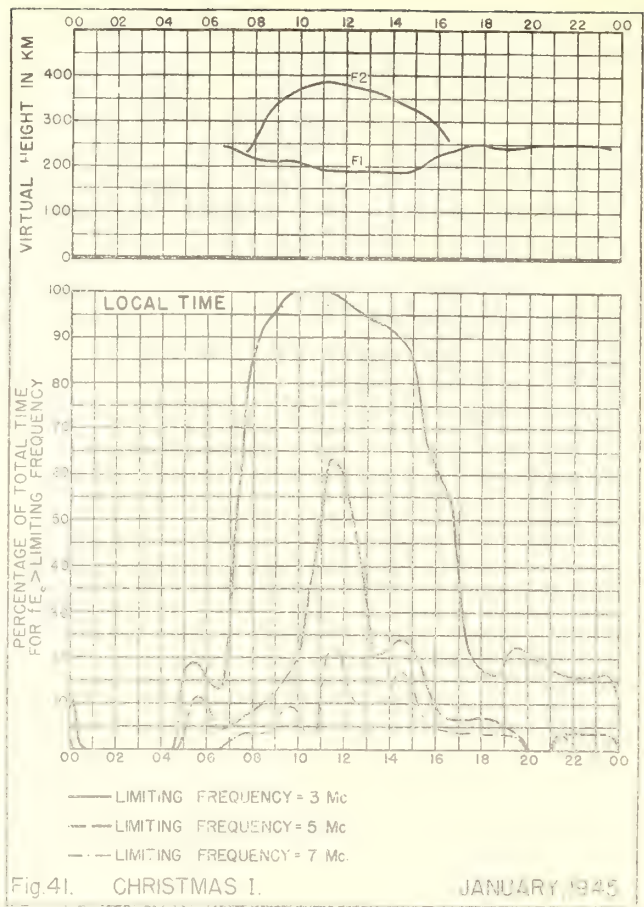
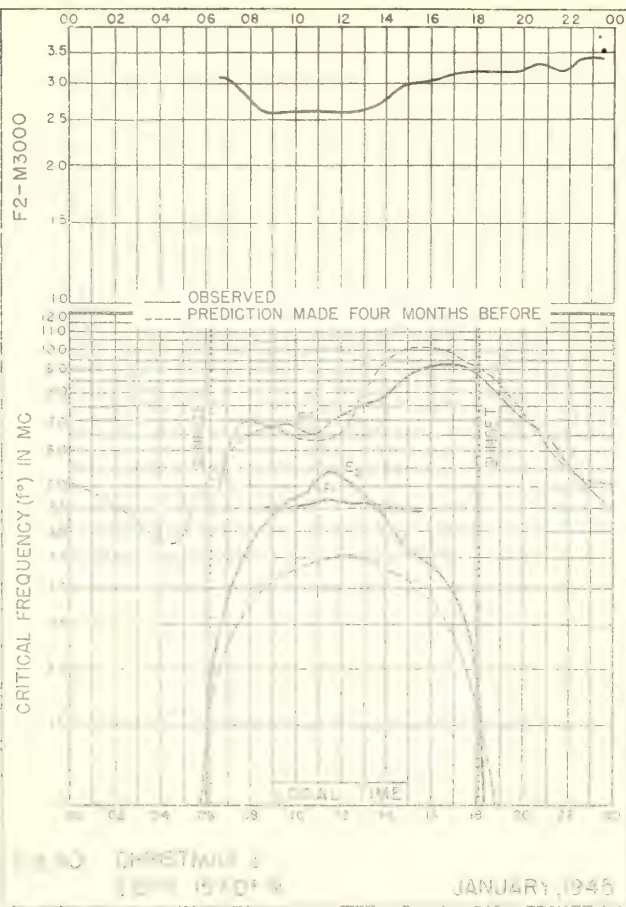


Fig.35. BURGHEAD, SCOTLAND
57.7°N, 3.5°W

JANUARY, 1945





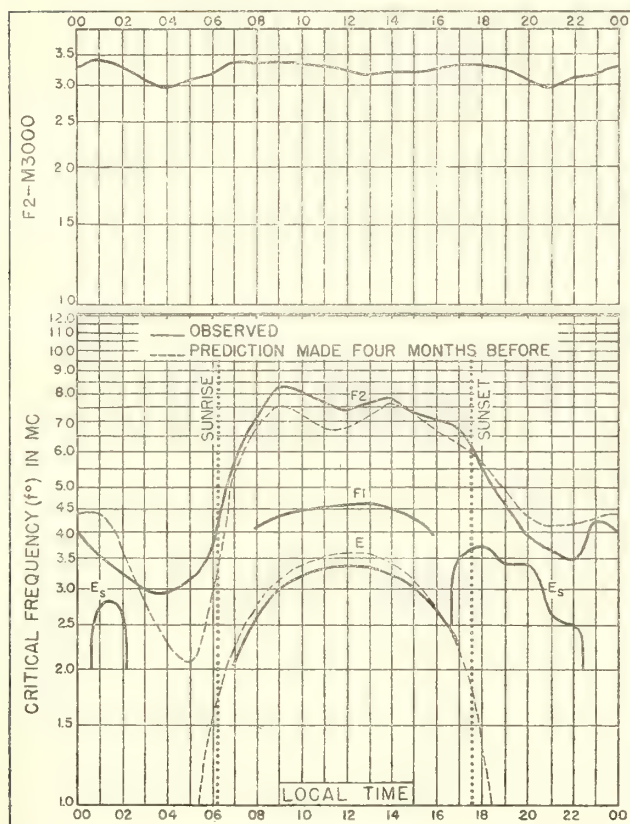
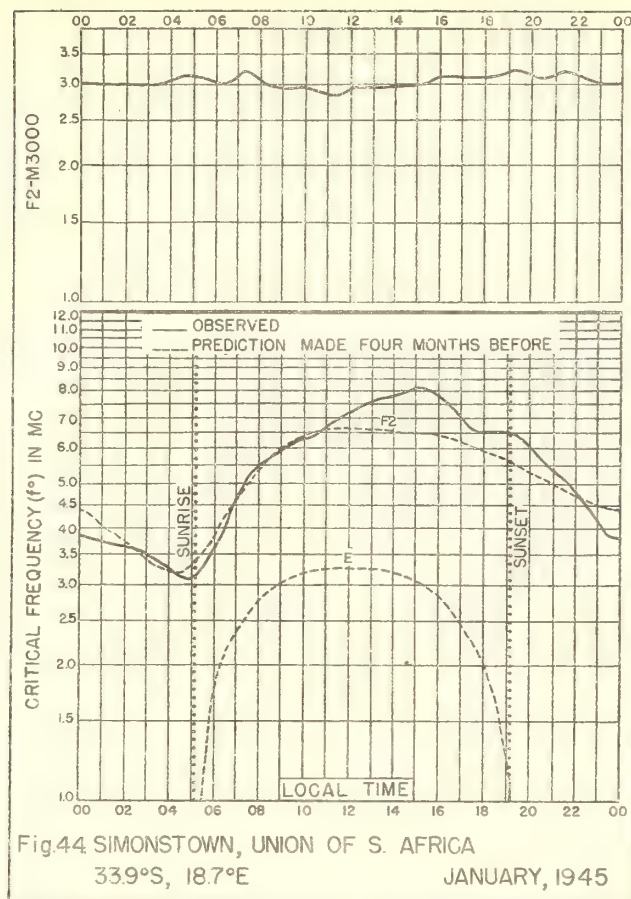


Fig.45. TRINIDAD, BRIT. WEST INDIES
10.6°N, 61.3°W
DECEMBER, 1944

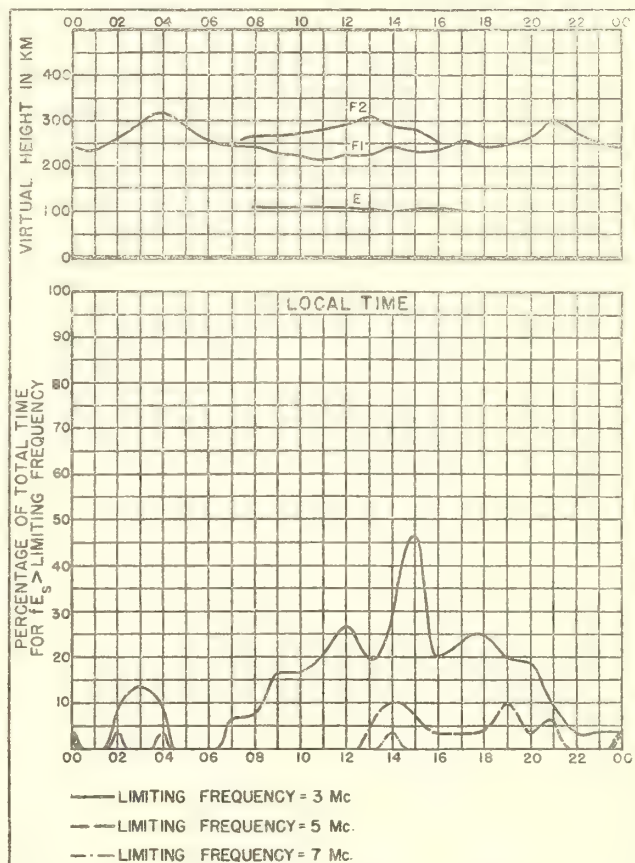


Fig.46. TRINIDAD, BRIT. WEST INDIES
DECEMBER, 1944

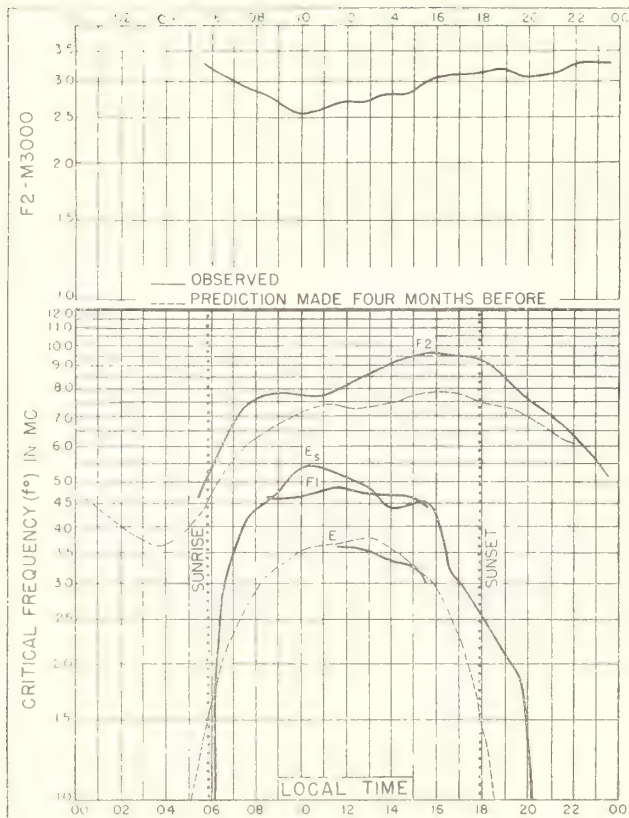


Fig.47. CHRISTMAS I.
2.0°N 157.0°W
DECEMBER, 1944

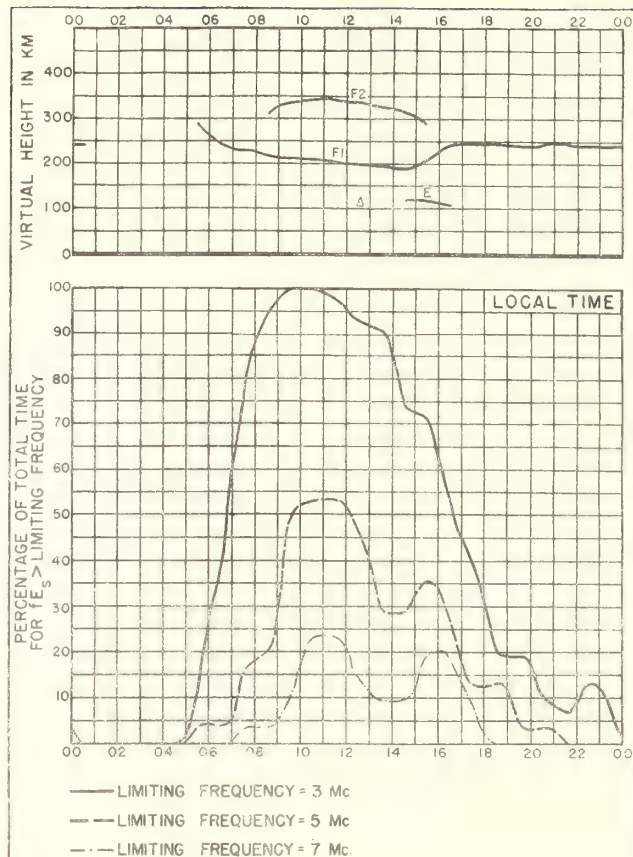


Fig.48. CHRISTMAS I.
DECEMBER, 1944

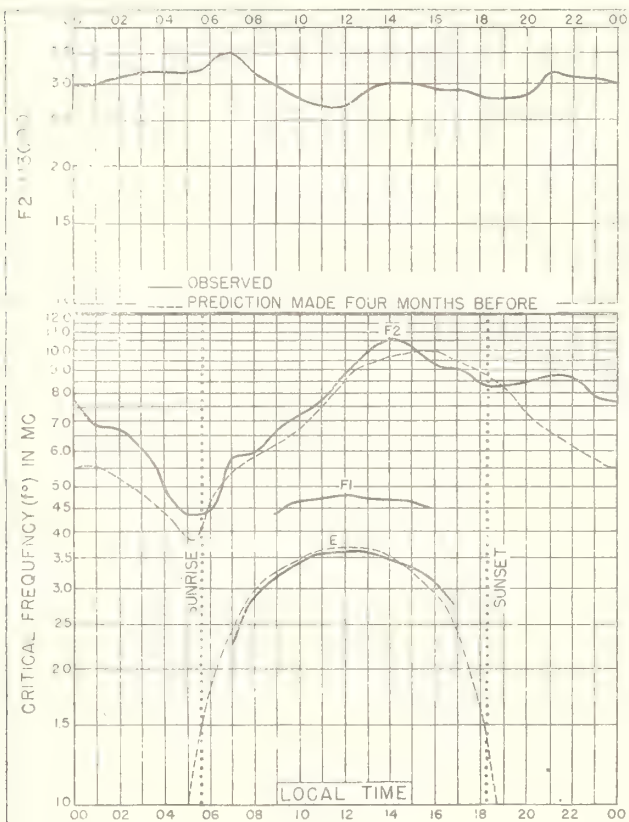


Fig.49. CAPE YORK, Q, AUSTRALIA
11.0°S, 142.0°E
DECEMBER, 1944

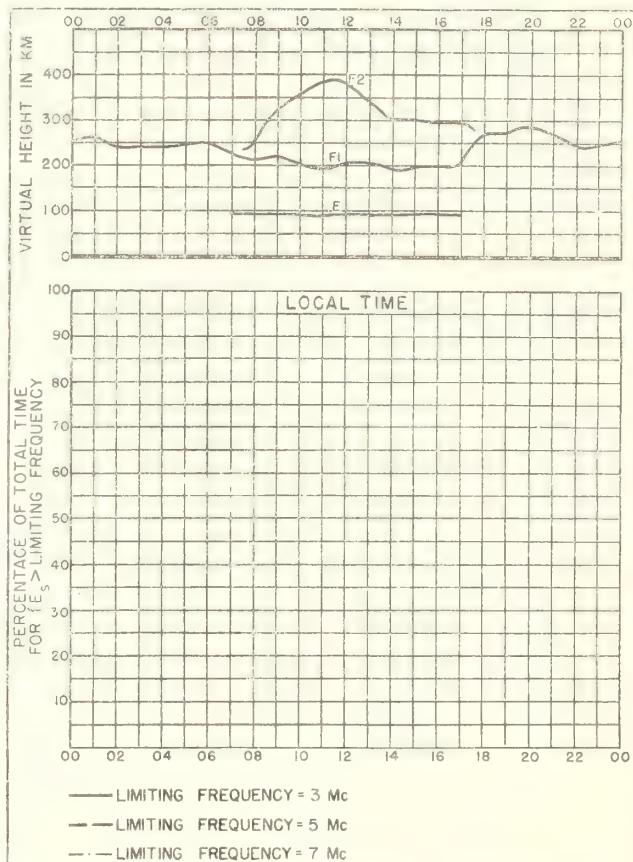


Fig.50. CAPE YORK, Q, AUSTRALIA
DECEMBER, 1944



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